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VOL. XIII. NO. 16.

AUGUST 15, 1885.

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GLEANINGS IN BEE CULTURE

DEVOTED
TO
BEEKEEPING

PUBLISHED SEMI-MONTHLY,
AT
MEDINA, OHIO
BY
A. I. ROOT

TERMS, ONE DOLLAR PER YEAR.

Books for Bee-Keepers and Others.

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THE

British Bee Journal.

The British Bee Journal is now mailed to our address in packages, semi-monthly. In order to dispose of them, we offer them at present at \$1.40 per year, postage paid, beginning January, 1885. Will guarantee safe arrival of every number.

A. I. ROOT, Medina, Ohio.

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20 Colonies of Pure Italian Bees in Langstroth frames, straight pretty combs, with honey, in **DOUBLE-WALL OBSERVATORY HIVES**; Been used two seasons, with one-pound boxes, and for extracting. Complete on board cars, for \$8.00 per colony, or \$14.00 for the lot.

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After August 15, I think I shall be able to send queens by return mail. They are daughters of an imported queen, but fertilized in my apiary of 60 colonies of Italians. My Carniolan bees are easily distinguished from native bees by their appearance alone, and they are quieter and much less inclined to sting than the gentlest bees of any other race I have seen. Sample Carniolan bees, 10c., postpaid. Carniolan queens, safe arrival guaranteed by mail, one dollar each.

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JAMES H. MORRISON,
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Has a lot of fine Italian queens raised from splendid stock, that he will sell at \$1.00 each; \$9.00 per dozen, or \$65.00 per hundred. Safe arrival guaranteed. 16-17d

NUCLEUS.—I have 50 two-frame nuclei, strong in bees, with fine dollar queen. I will sell for \$2.50 each. By adding frames of brood or empty comb these nuclei can be built up to strong colonies for winter.

16d

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Box 584. Bradford, Pa.

TO CLOSE OUT.

I will sell 12 chaff hives, made up and painted, at \$1.00 each. Also three colonies Italian bees at \$3.00 per colony. **W. K. LEWIS, DRY RIDGE, TX.** 16d

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How to rear queens by the best and simplest methods. For particulars address 16tdfb **HENRY ALLEY, WENHAM, MASS.**

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Italian Bees For Sale at \$5 Each.

Ten frames, combs all built on wired foundation, and filled with honey and brood. Hives all well painted. Queens raised from imported stock. Will ship during August and September.

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JOB LOT OF WIRE CLOTH

AT GREATLY REDUCED PRICES.

SECOND QUALITY WIRE CLOTH AT 1½ CTS. PER SQUARE FT.

SOME OF THE USES TO WHICH THIS WIRE CLOTH CAN BE APPLIED.

This wire cloth is second quality. It will answer nicely for covering doors and windows, to keep out flies; for covering bee-hives and cages for shipping bees; making sieves for sifting seeds, etc.

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Inches Wide.	No. of Rolls.
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20	2 2 rolls of 166 s. f. each
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24	6 4 rolls of 200, 1 of 180, and 1 of 120 s. f.
26	7 23 rolls of 217, 38 of 216, 2 of 195, 1 of 156, 1 of 152, 2 of 215, 1 of 210 s. f.
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34	7 3 rolls of 281 s. f.
36	
38	37 23 rolls of 316, 3 of 285, 2 of 317, 1 each of 190, 632, 178, 126, and 219 s. f.
42	1 1 roll of 243 s. f.
44	2 1 roll of 366, 1 of 348 s. f.
46	1 1 roll of 132 s. f.
48	12 11 rolls of 400, 1 of 200 s. f.

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32	14 of 266, 7 of 256, 2 of 255 square ft.; 1 each of 233, 251, 147, 215 sq. ft.
34	31 rolls of 283 sq. ft. each; 1 each of 62, 113, 198 sq. ft.
36	22 rolls of 300 sq. ft. each; 2 of 72, 1 each of 288, 150, 279, 285 sq. ft.
38	1 roll each of 300 and 316 sq. ft.
40	1 roll of 233, 1 of 100 square feet.
42	1 roll of 350 square feet.
46	1 roll of 192 square feet.

A. I. ROOT, Medina, Ohio.

DADANT'S FOUNDATION

is asserted by hundreds of practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenest, and neatest, of any that is made.

It is kept for sale by Messrs. A. H. Newman, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; Dougherty & McKee, Indianapolis, Ind.; Chas. H. Green, Berlin, Wis.; Chas. Hertel, Jr., Freeburg, Ill.; Ezra Baer, Dixon, Lee Co., Ill.; E. S. Armstrong, Jerseyville, Ill.; H. Drum, Adelphi, O.; Arthur Todd, Germantown, Philadelphia, Pa.; E. Kretschmer, Coburg, Iowa; E. F. Smith, Snynra, N. Y.; C. T. Dale, Mortonsville, Ky.; Clark Johnson & Son, Covington, Ky.; King, Aspinwall & Co., 16 Thomass St., New York City; C. A. Graves, Birmingham, O.; M. J. Dickson, Hiawatha, Kan.; J. W. Porter, Charlottesville, Albemarle Co., Va.; E. R. Newcomb, Pleasant Valley, Dutchess Co., N. Y., and numerous other dealers.

Write for samples free, and price list of supplies, accompanied with 150 Complimentary and unsolicited testimonials, from as many bee-keepers, in 1883. We guarantee every inch of our foundation equal to sample in every respect.

CHAS. DADANT & SON,
36tdfd **Hamilton, Hancock Co., Illinois.**

I Will Sell Full Swarms of Pure Italians

In the Langstroth Simplicity 10-frame hive. For a single swarm, \$6.00; two or more, \$5.00 each; five or more, \$4.50 each. Safe arrival guaranteed.

Address **M. R. NICHOLS,**
15tdfb **Weaver's Corners, Huron Co., O.**

HONEY COLUMN.

CITY MARKETS.

KANSAS CITY.—*Honey.*—Trade in this article very quiet just now, mostly extracted in bulk and our small glasses and tins, moving at this time of the year. We have made some large sales of extracted honey this week. Southern, 5¢@6¢; clover and sage, 6¢@7¢. Comb honey nominal at 12¢@13¢ for choice 2-lb. sections; 13¢@14¢ for 1 lb. *Beeswax* weak, 20¢@25¢.

CLEMONS, CLOON & CO.,

Cor. Fourth & Walnut Sts., Kansas City, Mo.

Aug. 6, 1885.

ST. LOUIS.—*Honey.*—The warm weather continues to depress our honey market. Extracted in barrels, Southern, old, 3¢@3½¢; new, 4¢@4½¢, nominal. In cans, retail, Northern white clover, 9¢@10¢. Comb honey, old, not salable; very little new in market. We look for an improvement in a few weeks. *Beeswax*, 22¢@23¢.

W. T. ANDERSON & CO.,

Aug. 10, 1885. 104 N. Third St., St. Louis, Mo.

CHICAGO.—*Honey.*—The new crop is coming in to a fair degree, and the demand is about equal to the receipts. It brings 15¢ per lb. for 1-lb. sections; little else coming. Extracted honey, 5¢@7¢; demand better. *Beeswax*, 22¢.

R. A. BURNETT,

Aug. 11, 1885. 161 So. Water St., Chicago, Ill.

CLEVELAND.—*Honey.*—New honey has made its appearance, and is selling in 1-lb. sections at 15¢@16¢. Old honey stands still, there being no demand for it; still, we are willing to sell it at 11¢@12¢. *Beeswax*, 22¢.

A. C. KENDEL,

Aug. 12, 1885. 115 Ontario St., Cleveland, O.

CINCINNATI.—*Honey.*—No change whatever since my last. Market dull for all kinds, with large arrivals. *Beeswax*, no change; arrivals and demand fair. It brings 20¢@22¢ on arrival.

CHAS. F. MUTH,

S. E. Cor. Freeman and Central Avenues.
Aug. 11, 1885. Cincinnati, O.

DETROIT.—*Honey.*—The honey market is still very dull. One-pound sections are selling at 10¢@12¢.

A. B. WEED,

Aug. 12, 1885. 407 Woodward Ave., Detroit, Mich.

HONEY AND BEESWAX.

We are now in the market, and will be during the entire season, for all honey offered us, in any quantity, shape, or condition, just so it is pure. We will sell on commission, charging 5 per cent; or if a sample is sent us, we will make the best cash offer the general market will afford. We will handle beeswax the same way, and can furnish bee-men in quantities, crude or refined, at lowest market prices. Our junior member in this department, Mr. Jerome Twiehell, has full charge, which insures prompt and careful attention in all its details.

Sample of comb honey must be a full case, representing a fair average of the lot. On such sample we will make prompt returns, whether we buy or not.

CLEMONS, CLOON & CO.,

15-2db Kansas City, Mo.

MUTH'S

**HONEY-EXTRACTOR,
SQUARE GLASS HONEY-JARS,
TIN BUCKETS, BEE-HIVES,
HONEY-SECTIONS, &c., &c.**

Apply to CHAS. F. MUTH, CINCINNATI, O.

P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keepers." 1tfd

Wanted, Situation in California

By a young married man, who wants to try California before locating; has had 15 years' experience with bees, has 250 stands; is a carpenter and builder, will work at any thing during winter; would like to come in December. How much am I offered? 16d

F. J. FARR, Buckner, Mo.

HUTCHINSON'S

ADVERTISEMENT.

We are now making a specialty of rearing fine Italian queens. All queens are bred from the purest and best of mothers, and the cells built in full colonies. We have one of A. I. Root's very best, selected, tested, imported queens, also quite a number of very superior home-bred queens from the apiary of "Cyula Linswik." Besides this we have our own original stock which was built up from Dadant imported stock and from queens obtained from several of our best breeders. We are not trying to see how cheaply we can rear queens, but how good ones we can furnish. No queens will be sent out that would not be used in the home apiary. Single queen, \$1.00; six for \$5.00; twelve or more, 75 cts. each. Tested queens, \$2.00 each. Full colonies, \$5.00 each. Make money orders payable at Flint. Address

W. Z. HUTCHINSON,

15tfd Rogersville, Genesee Co., Mich.

ORDERS ALL FILLED.

We have a fine lot of queens now ready to ship. We claim to have the brightest yellow Italian bees in America. T. S. HALL, Kirby's Creek, Ala. 16-17d

Wanted. A competent man to conduct an apiary, also a poultry ranche. Address with reference, L. A. FITZPATRICK, 16-19db Hyde Park, Phillips Co., Ark.

DADANT'S FOUNDATION FACTORY, Wholesale and retail. See advertisement in another column. 3btfid

EXCHANGE DEPARTMENT.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 5 lines, and you must say you want your ad in this department, or we will not be responsible for any error.

WANTED.—Comb and extracted honey, and wax, in exchange for Italian bees, queens, foundation, or fdn. machinery. Also two foot-power-saw mandrels with 5 and 6 in. saws. See circular, and state particulars. 16d OLIVER FOSTER, Mt. Vernon, Linn Co., Iowa.

WANTED.—To exchange bees in L. hive for thoroughbred poultry. 16-17d B. J. PURCELL, Concord, Ky.

WANTED.—In exchange for new varieties of strawberries and raspberries, Plymouth Rocks, Light Brahmas, Pekin Ducks, new varieties of potatoes, and small-fruit plants, cherry and quince trees. P. SUTTON, Exeter, Luz. Co., Pa. 16-23db

WANTED.—To exchange Zimmerman Fruit-Evaporator, and 100-egg incubator, both new, for good section and extracted honey. Will give you a bargain now.

16d KANAWHA-VALLEY APIARY, St. Albans, W. Va.

WANTED.—To exchange a new circular-saw machine for hive-making, worth \$25.00, for extracted honey. Address 15tfd D. S. HALL, So. Cabot, Vt.

WANTED.—To exchange salt mackerel in 20-lb. pails, for good extracted honey. 16d E. E. LING, 11 Silver St., Portland, Maine.

WANTED.—To exchange Italian bees for beeswax; 20 lbs. wax for a colony. 16tfd M. ISBELL, Norwich, N. Y.

WANTED.—To exchange a 50-inch Standard Columbia bicycle, in good order, for honey (comb honey preferred); will take part money to suit the purchaser. Correspondence solicited. F. E. EDWARDS, Bellows Falls,

16 Box 520. Windham Co., Vermont.

WANTED.—To exchange for Italian queens or cash, late spring Plymouth-Rock Cockerels. Warranted. Prices, single, \$1.50; pair, \$2.00. J. B. MARSH, Collinsville, Ala.



Vol. XIII.

AUG. 15, 1885.

No. 16.

TERMS: \$1.00 PER ANNUM, IN ADVANCE; 2 Copies for \$1.90; 3 for \$2.75; 5 for \$4.00; 10 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

Established in 1873.

PUBLISHED SEMI-MONTHLY BY

A. I. ROOT, MEDINA, OHIO.

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A WORD TO THOSE WHO EXPECT TO BUY BEES IN THE SPRING.

WHICH IS BETTER, TO BUY NUCLEI NOW AND BUILD THEM UP, OR PURCHASE FULL COLONIES IN APRIL?

THE above question was propounded by a customer who called to see us yesterday. He wants to begin with bees, and has not very much capital. Now, let us see. A full colony in April, according to our price list, and, I think, according to the price list of most reliable dealers, will cost about twice what it would after the first of July. You see the price of a colony of bees runs down rapidly after the honey season is over, when no more honey is to be gathered, or, at least, not much prospect of any. Then the wintering trouble has to be faced, so that bees, just before the honey season, early in the spring, ought to be worth at least double what they are in the fall. It is true, some advertisers offer them less, but they do not often furnish full colonies. When we send out a full colony in April we take the best we have in the apiary; and if we haven't any that can be consistently called a good strong colony, we take hatching brood from one or more of the others. If we do this, of course we must have a good price. But such a colony is worth a good price, for it can be divided at once, or made to give a good crop of honey or many swarms, because it is strong even before the season opens. Our friend thought he ought to have about six colonies to begin with. Six colonies as above, with select tested queens would be worth \$156; with the discounts \$117.00 in April, 1886.

He could not afford so much money, so he, by my advice, bought six pounds of bees, with a comb of brood and a select tested queen for each pound. These cost him \$27.54, therefore he would have \$89.46 to buy sugar, and to pay him for his labor in feeding them and building them up to full colonies in time for winter. As he has plenty of time, and is anxious to learn bee culture, his experience in building them up will be worth a good deal to him, to get them ready for next season's work. Of course, he has the wintering trouble to face; but even if he loses them, the amount invested is not very large after all; and if he takes right hold of it, and does his duty, I think there can be little question but that they will winter. As he is in a locality where there is little chance for fall honey, his built-up colonies will have stores of granulated sugar; and if put in chaff hives, I think there is little doubt but that they will winter safely—at least, reports from colonies built up in this way have always been favorable. As our friend knows comparatively little about bees, I told him that he had better get some experienced bee-man near him to take a look at his nuclei occasionally, to see if they are building up as they ought to do. He chose select tested queens, because we have tested these for prolificness, and any one of them would fill a hive with brood very speedily.

Of course, he must have six hives for his bees, and he also wants some combs of foundation. This will make somewhat of an additional expense. He might have saved a little expense by taking untested queens instead of select tested, and I think I would, as a general thing, advise the untested. The

expense of making the experiment is then comparatively trifling. If he succeeds in building his nuclei up to good strong colonies, and winters them, he will probably make a profitable investment of it next year. If he is not calculated for a bee-man he will probably lose them all during the winter, and become disgusted with the business, without being very much out of pocket. The question is, Will a pound of bees, and a frame of brood and a queen, started, say, in the middle of August, build up so as to make what may be called a fair colony by the middle of November? We could do it easily here; but whether the average novice would succeed in doing it, is another question. I advised him to use the Simplicity feeder, because this will hold all a pound of bees will need at a time, and the expense is trifling.

Very likely many of you can buy cheaper than at the prices I have given. In fact, nuclei are advertised in this number, cheaper than we sell them; and if you wish to purchase, I would advise you by all means to buy of somebody near your home, to save the expense of express charges. If you can go and get them with a horse and spring wagon, all the better. I do not know of any work I ever enjoyed more than building up nuclei in the fall into full colonies, in this way. I would keep up the feeding until the weather gets too cold for the bees to take it from the Simplicity feeder; and then if they have not an abundance of stores to go into winter, I would commence feeding again in the spring, as soon as it is warm enough for them to go back to the feeder again. As the weather becomes cool, I would cover the brood-nest, all except a little opening right over the cluster, and I would set the Simplicity feeder right beside this opening. If this opening is small, say half an inch in diameter, it will do no harm if left open all winter. Such openings had better always be left, unless the covering to the bees is some coarse material, such as burlap or sacking.

I should very much like to hear reports from those who undertake this matter of building up nuclei, so that we may determine for future seasons how late it will be safe to attempt it. Of course, much depends on the laying powers of the queen, and the way in which the bees go to work to help her. The pound of bees ought to be young ones.

MRS. CHADDOCK'S LETTER.

She Tells Us how to Make Beeswax out of Doors.

ALSO SOMETHING ABOUT A BEE-MAN WHO MAKES MONEY.

LAST Monday I spent a pleasant hour with Mr. Rufus Porter, of Lewistown, Ill., and his most estimable wife. Mr. Porter has been for many years a successful bee-keeper; but he is not doing any thing with them now, his son having the entire control of them. Mr. P. has about 75 colonies at present, in Langstroth hives, and he runs them altogether for extracted honey. He ships all his honey, and pays no attention to his

home market; he winters successfully, and he knows how to render beeswax. He told me how his bees were prepared for winter. In September, or early in October, he takes off the honey-apartment, and places a few corn-cobs, or a little frame made on purpose, over the brood-nest, and then he puts on a frame made to fit the top of the hive and to go inside the cap, with a piece of coarse coffee-sack nailed across the bottom of it. This frame is filled with wheat chaff thrown loosely in, and not packed down at all. His bees face to the south, have no shade over them, and he lets them severely alone. After he had said a good many other things, he said, "Now I want you to take something back. I'll tell you how I extract beeswax, and I want you to promise to try my way."

"Oh!" said I, "you have a wax-extractor."

"Well, yes," said he; "I have one; I paid six dollars for it, but I do not use it. I have a big iron kettle sitting away back in the yard on some stones, and when I have some wax to render out I build a fire under the kettle, fill it nearly full of water, and after it comes to a boil I dump in part of the old combs; and as the wax rises to the top I dip it off and pour it through a sieve, made of mosquito netting, nailed to a frame—this frame, or scive, being placed over an old tub, or half a salt-barrel will do, with cold water in it. When I have dipped off all the wax that rises from what I first put in, I put in another batch, and dip off again, not letting the water boil, but just keeping it boiling hot. After I am through with melting I take the wax out of the cold water and heat it so that it will run, and make it into any shape that I want it. Now I want you," said he, "to try my way, and report on it. You can burn the half-barrel and the sieve when you get through, and there will not be many things to clean up. Now, will you try this way?"

I said, "May be."

In 1871 Mr. Porter made \$1200, *clear money*, from one hundred colonies of bees (spring count, I believe). But this is no sign that others can do it, Mr. Porter being one of those who have the touch of Midas (was it Midas? If not, it was somebody else, who turned every thing he touched into gold). Any way, he knows how to get money out of every thing that he undertakes. He was engaged for a number of years in the small-fruit business, and he made money at that. Now he is running a drain-tile factory, and all of you who live on low land know that there is money in drain tile.

MAHALA B. CHADDOCK.

Vermont, Ill., Aug., 1885.

Mrs. C., friend Porter's plan might please some of the friends, under some circumstances; but it seems to me as if it would be also wasteful. He had better buy a sort of press to squeeze the wax out of the residue; and it seems to me that, in burning up the barrel and sieve, that is rather wasteful too, because a good deal of wax will be adhering to them, unless you clean it off with boiling water or steam. We do not like to waste even a barrel on our premises. It has one merit, however—it gets unsightly things out of sight, unless you should call the old kettle unsightly; but I suppose that might be kept back of the barn or hog-pen. You know I think it is a grand thing to keep the front yard looking tidy, even if you can not have all the premises so.

FALSE STATEMENTS IN REGARD TO THE HONEY BUSINESS OF OUR COUNTRY.

As a protection to our bee-keeping population, we propose in this department to publish the names of newspapers that persist in publishing false statements in regard to the purity of honey which we as bee-keepers put on the market.

WE are pleased to notice some kind words from the *Prairie Farmer* in regard to the way in which bee-keepers have been wronged by newspaper stories about the adulteration of honey. It is pleasant to know that at least one of our agricultural papers feels like helping to right so great a wrong.

One of our correspondents sends us the following clipping from the Anaheim, Cal., *Gazette* of July 18:

The Massachusetts State Board of Health, from recent investigation, finds that there is very little pure honey in the State. That sold in little glass jars is not honey at all, but simply glucose, with just a little of the honeycomb put in.

The above has been going the rounds for some little time, and we should like to have the matter investigated. In the first place, what is the Massachusetts State Board of Health? Can any of our friends who live in the above State tell us about it? Next, is it true that the honey offered for sale in the provision stores of Massachusetts is, very little of it, pure honey? Will the bee-keepers of that State please look into the matter? It seems to me it is a gross misrepresentation. If it is indeed true, that Massachusetts is flooded with spurious honey, then the bee-keepers of the State, assisted by the bee-keepers of other States, if need be, should look to it that good pure honey be offered at a reasonable price by all who make it their business to deal in honey. We shall be very glad indeed of help to get more facts in the matter. Each State in the Union has a duty to perform in this matter. Who will help to remove this stigma from the bee-keepers of Massachusetts?

BEES AND FRUIT.

I inclose you a new remedy for killing bees when troublesome to fruit, which you will please insert in GLEANINGS, for the amusement of our bee-keeping friends. It is taken from our local paper, and is the funniest thing relating to bees which I have ever read. Oh how it made me laugh when I read it! I want to add, that "many fruit-growers" don't adopt the "ingenious and efficacious" plan, or else what a glorious time the bees would have!

The irrepressible conflict between the fruit-grower and the bee-keeper is again to the fore. Though grapes are not ripe, the bees are busily at work harvesting them, to the annoyance and loss of the vineyardists; and unless the owners of the deprecating bees coral them, we are requested to give warning that the bees will be warred upon.

The ingenious and efficacious way of killing bees which many fruit-growers here adopt is to attract the bees to vessels of honey on which common flour has been sprinkled. This flour adheres to the feet of the bees, and is thus carried to the hive, where it ferments and asphyxiates the inmates.

—*Anaheim Gazette*, July 18, 1885.

Now, I want to ask a question. Suppose bees take a load of some liquid or fruit-juice that has been poisoned with strychnine or arsenic, will it kill them before they are able to store it in the hives, or can

they carry it in and store it in sufficient quantities to hurt human beings, if eaten?

1—ALFRED W. HIND, 16—20.

Anaheim, Cal., July 29, 1885.

Friend H., no doubt the extract you send us will provoke a smile from many bee-keepers, and yet there is something sad about it to me, to think that we must have difficulty and disagreement.—Bees will usually die before they get to the hive, when poisoned with Paris green or other arsenical preparations; but I should think it quite probable that, when the distance is short, they might carry enough into the hives to make the honey dangerous for people to eat.

A BEE-CONVENTION IN SYRIA.

AN INTERESTING LETTER FROM FRANK BENTON, IN REGARD TO APICULTURE IN PALESTINE.

WE had a bee-convention in Syria; or, rather, we've been having a series of them here recently. This may seem rather surprising news to people of the Western World, who suppose Syria is beyond the pale of civilization. But though the country is in many respects behind Europe and America, modern methods in bee culture have now taken permanent root here. The gatherings have been quite informal in their nature, as close application of parliamentary rules in the conduct of such meetings is not the way of the country; moreover, of the seven or eight different languages represented by the members of the convention, four had to be employed in the talks on bees; namely, English, French, German, and Arabic. Perhaps some of the friends in other countries, who find with but one official language in their conventions it is still difficult to get on harmoniously, will wonder what we could do with such a Babel of tongues. Nevertheless we got on quite well, and the interchange of ideas will no doubt prove of great value to many of the participants. At one of the meetings a president was unanimously elected, but he hasn't yet called anybody to order. Probably the most important work done by the convention was the adoption of a standard frame for Syria, to be known as "the Syrian Standard Reversible Frame." All bee-keepers in countries where several sizes of frames have come into use will comprehend at once the wisdom of such a step while movable-comb bee-keeping is yet in its infancy in these parts. The frame adopted measures 14½ inches (= 365 mm.) in length, and 8½ inches (= 223 mm.) in depth. All members of the convention, which included two Americans, one Frenchman, one German, one Italian, and a number of Syrians, follow American methods altogether in their apiaries, if we except one, a Syrian peasant who has but one frame hive as yet, and for the present retains native hives—long cylinders made of clay or of wicker-work, and also earthen water-jars, into both sorts of which the bees are put after the receptacle has been laid on its side.

Among other topics which were discussed at our meetings, migratory bee-keeping (already largely practiced here) and hives adapted to it received much attention; also in connection with this the various bee-ranges of the country were discussed. Orange-blossoms furnish the chief spring harvest, though almond, apricot, and other fruit-blossoms,

are of importance. Cactus-plants supplement these; in fact, in many localities they form the chief early honey-yield. The late harvest comes in midsummer from wild thyme, which is abundant in most of the hilly and mountainous portions of the country. Of course, there are also many minor sources,—wild flowers, etc. It was agreed, that where orange, cactus, and thyme blossoms were abundant, with the usual minor yields, nothing would be gained by transporting bees to other pastures.

The wintering problem didn't get much attention, since there is no difficulty on that score here; nor did we devote very much time to a discussion of the relative merits of the different races of bees, as none but Syrians are kept in Syria. The writer, however, and a member formerly in his employ in Cyprus, testified to the superiority of the Cyprians over the Syrians. No other members had had any experience with Cyprians.

Altogether, a bee-convention in Syria may be considered an interesting and important event — interesting to the outside world as showing the progress already made, and that America has been taken as the model; important to the country itself, both because it is likely to spread greater interest in an industry which can be made to contribute much more than heretofore to the welfare of Syria, and because the proceedings are likely to induce a more systematic development of the industry in the East.

The convention adjourned to a photographer's, and the migratory shadows were committed to paper. As far as means will permit, copies of the same will be sent to the bee-journals.

Friend Root, of GLEANINGS, will surely take kindly to our President, who appears in the center of the group with his hand resting on the A B C book. French bee-keepers will not be ashamed of their countryman, Mr. Philip Baldensperger, whose large honey-yields in Palestine have attracted attention, but which have unfortunately been attributed to German methods and even to German bee-keepers, by parties who knew better.* Messrs. Demmler & Zwilling, of Alsace-Lorraine, will recognize in his hand a copy of their journal. It so happens that this disciple of American bee culture is flanked by Americans; for your humble servant, to whom the penning of these chronicles seems by common consent to have been left, stands at his other hand. The little block of wood with three holes in it, and the reversible frame with no attachments or projecting corners, will be recognized by some, any way. A man of Italian origin stands at my left. He has never owned any bees, but was in my employ some time; in fact, I might say he has been my *left-hand man* for two or three years past. Still further to the left, a Syrian schoolmaster, owner of ten hives, holds in his hand a copy of the *British Bee Journal*; yet though he knows English and French, he is not a subscriber to nor a reader of any bee-journal, nor has he ever owned or read a book on bees. Perhaps this Syrian friend prefers the *name* and not the *thing*. In front of him is a Syrian merchant — a former landlord of mine. The good-looking full-bearded man who stands at the left in the picture represents the sturdy German race, and says he is "strongly interested in bees." Next to him is a peasant friend with his daughter. The lat-

ter, who holds an earthen jar such as the peasants employ as hives, has had much to do with recent work in bee culture here; for on a tray placed on her head she has brought down from distant villages of Mt. Lebanon, in twos, many of the stocks of bees that have furnished the queens for customers in far-off Europe and America. The juveniles are represented by two rising bee-keepers, one of whom has evidently adopted the smoker, while the other has "sat down" on the native cylinder hive.

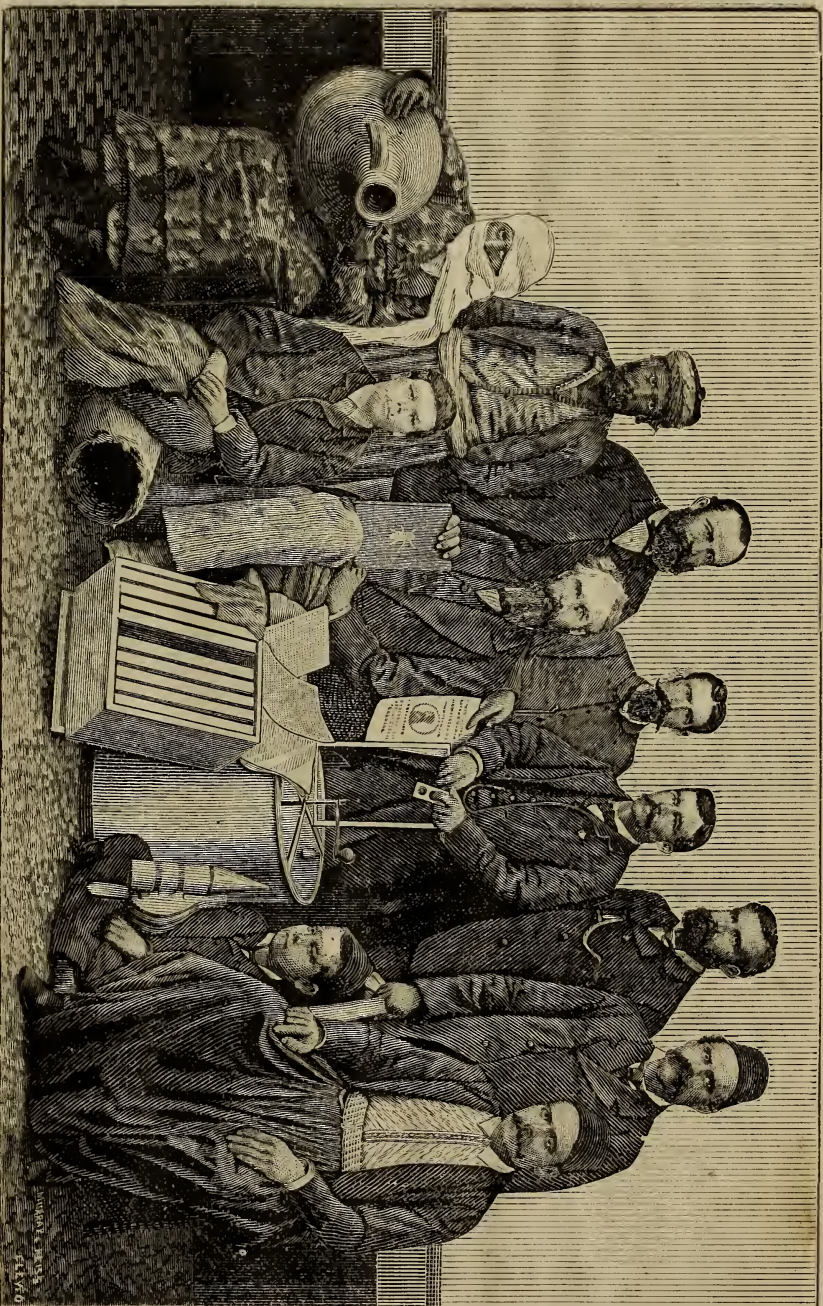
Our eyes are turned toward America for light in bee-keeping matters; and if the world hears of large reports from these shores of the Mediterranean, the credit of them will, it is to be hoped, go where it belongs.

FRANK BENTON.

Mt. Lebanon Apiary,
Beyrout, Syria, May, 1885.

Friend Benton, we are exceedingly obliged to you for your picture, and the very graphic description you have given of it. We are very glad indeed to be able to look upon the countenances of our far-away friends and comrades; and with what alacrity would we extend the hand of fellowship, had we the opportunity of mixing in with your little group! Please tender them all our kindest wishes, and tell them that it will afford us the utmost pleasure to assist them in any way in getting the "hang" of modern bee culture, as it is now practiced here in America. But, look 'e here, old friend. I do not know whether we had better claim to be in advance of you away off there in Syria or not, while you hold that reversible frame in your hand—that frame "without any corners or projections," as you express it. You know I said in an editorial a year or more ago, that the thought of such a frame kept haunting me. When I was half asleep at night, some phantom would hold it out to me, and I would jump and grasp for it; but when I got it, and began to think it over, I could not discover any practical way of using it, without hitching something on to the corners, like our reversing wires for instance. I suppose you mean that the frame that you hold belongs in that hive in front of you, where we see the vacant place. Now, will you be so kind as to tell us what holds it in place after you put it in? What keeps it from pushing over against its neighbors, or from mashing bees against the end of the hive, and at the same time gives a lateral movement endwise and sidewise, that we have almost all decided we must have, from good old father Langstroth down? If you have something that you can work with in that way, please out with it, and don't keep us in suspense.—Are you not a little severe on our friends Howard and Alley? I have not looked up the reference, but I feel quite sure that our good friend Howard, who made us a call about a year ago, did not mean to misrepresent in any way. It is true, that the Palestine queens that he brought us have not turned out very well, for we have only one of them left, and that one produces such small cross bees, and not extra honey-gatherers either, that we do not dare offer for sale any queens reared from her; but for all that, I am sure that friend Howard supposed he was doing us a favor when he brought us the queens.

* See Howard's and Alley's reports in GLEANINGS and the A. B. J.; also see editorial notes in the *Bienen-Zuechter* of Alsace-Lorraine.—F. B.



OUR FRIEND FRANK BENTON AND HIS BEE-KEEPING COMRADES IN BEYROUT, SYRIA.
A Bee-Keepers' Convention with the Representatives of eight different languages present.

WINTERING WITH STORES ALWAYS ABOVE THE CLUSTER.

Report from Bee-Friends who keep from 400 to 500 Colonies in Six different Apiaries.

IN TWO CHAPTERS.

NOW that the fruit-trees are in full blossom, we think we can make our report and give our true standing in regard to loss of bees for the winter and spring. We went into winter quarters with 465 colonies of bees. To-day we count up 324, and we don't think we shall lose any more. This has been a very hard winter, and everybody's pet theory has been put to the test. For our part we have no pet theory further than this: When we lose a colony of bees we try to find out why they died. We have not lost a colony but that, on opening up the hive, the reason of the loss is plain enough to be seen. And just here I would say, we don't go a cent on the pollen theory or sugar stores either. We never take away any pollen, and have never fed a pound of sugar to our bees, but still we have been moderately successful with our bees; and even this very hard winter we are still 38 colonies ahead of last year, and all were wintered on their summer stands.

We keep our bees in six places—one yard at home, and the other five apiaries from four to nine miles away. We hire help during the extracting season only. All board at our house, and go with teams to the different yards, and extract one yard a day, and there is no one to look after the bees when we are away.

We raise but very little comb honey, and that at the home yard; we keep our queens all clipped.

But, why did we lose so many bees? Well, there are several direct and indirect causes. In the first place, I will say that all that died during the winter, starved—starved with plenty of honey in the hive; but the very cold weather prevented them from getting it. They ate their way up to the top of the frames. It was too cold to move to where they could get honey. Then they had the dysentery, and died. What gave them the dysentery? Perhaps it was pollen. But, why did they eat the pollen? Because they got out of honey. Now, I take the ground that, if they had honey directly over the cluster, they would have been all right; they would not eat pollen enough to hurt them. At any rate, we have not had one case of dysentery nor lost a colony of bees that had honey over the cluster—not a comb soiled, bees strong and healthy; on the other hand, when the bees ate all the honey over the cluster, clear up the top, they all had the dysentery; and what did not die right out dwindled badly—some deserted this spring.

We claim that the kind of hive used has a great deal to do with wintering bees successfully. We have been using three different frames and hives; but what we like best is a quadruple hive, double-walled, two inches of chaff all around, holding four colonies of bees, all under one roof. Each division of the hive is $13\frac{1}{2} \times 13\frac{1}{2} \times 21$ inches high, inside measure. We use 9 frames, which stand on the bottom; that gives us depth of frame; and if these nine frames are filled three-fourths full of good honey, the bees will commence the winter under the honey, and eat upward toward the top. The honey is all the time directly over the cluster. The bees work upward as they eat the honey, and it takes a long cold winter to get to the top; and unless they

do eat up to the top, they won't have dysentery, and they will stand a good deal of cold weather. We have some Langstroth hives, and a few Simplicity L. hives which we made last winter, so that, with what we had before, we have now enough quadruple L. hives to hold 104 colonies two stories high, using eight frames in each story. They are double walled with chaff filling. The chamber, or roof, covers the upper stories. The upper stories are movable. We can set them off the lower stories, each one by itself; this makes a good hive, safe to winter in. It has depth, as we leave the upper stories on full of good sealed honey. We have used a few of them now for three years with good success.

We have one quadruple L. hive that has been in use three years, and has never lost a colony in these three past hard winters, and no dysentery either. They had all the pollen they gathered, but I have always been particular that they had the upper stories filled with honey. Standing by the side of it is one of my tall quadruple hives (frames 21 in. high, nine frames), in which, three years ago, we put an imported Italian queen that we got of C. Dant. She is alive yet, and has a good strong colony. I have drawn two brood-frames from it this spring. This hive has not lost a colony in the three past years. We have been very careful that the hive had all four colonies in good trim in the fall, plenty of bees, and frames well filled with honey, because our imported queen was there.

Platteville, Grant Co., Wis., May 25, 1885.

CHAPTER II. WRITTEN THREE MONTHS AFTER.

We handle bees differently, perhaps, from any one else, but we get the honey—not quite as much this year as last, but we have 28,000 lbs., all extracted. Our best day we took out 2963 lbs.—2075 lbs. of it with one extractor. There were 12 days when we took out from 1000 to 1500 lbs. with one machine.

E. FRANCE & SON.

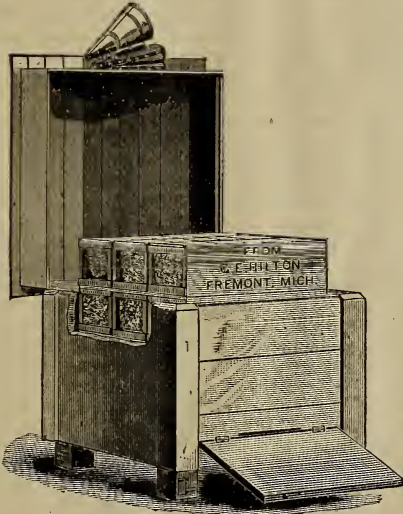
Friend F., I have no doubt that the tenement-hive idea, or, if you choose, having four colonies in one hive, placed so close together that they receive the benefit of the animal heat from each other, will be a safer arrangement for severe winters than we can possibly secure by having each colony in a separate hive. A great many who have tried tenement hives—ourselves among the number—decided that we could not stand the complication resulting, and the difficulty of manipulation. Some of the advocates of tenement hives say they would as soon handle bees in that way as in any other, but I can not agree with them. It seems to me that a better way still would be to have eight colonies in a single hive—four above, and four below, with entrances so the bees could go out when the weather permits. Eight colonies put closely together in this way, with a very thin board separating the clusters, would have a wonderful power in resisting the encroachments of frost. But then, there is the difficulty of handling the lower combs. After all such experiments, I have decided that I want each colony or nucleus in a separate hive, and that hive at least seven feet from any other. I am ready to change my mind, however, if any plan offers that will help us out of the difficulties I have mentioned.—I am very glad to receive such a report as you make in your second chapter. Wisconsin seems to be destined to keep up her reputation this season as well as last.

FRIEND HILTON'S BEE-HIVE.

A CHAFF HIVE WITH A HINGED CAP.

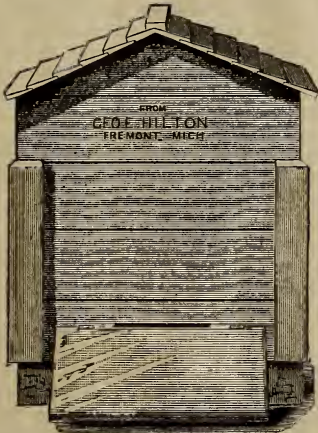
AT the State Convention last winter you told me if I would furnish the cuts you would be pleased to give an illustration and description of my hive.

The open hive shows two sets of crates filled with 1½-pound sections, giving surplus room for 90 lbs. The closed hive simply shows the general appearance.



GEORGE E. HILTON'S CHAFF HIVE.

The outside is made of $\frac{3}{4}$ lumber, two feet long, the ends nailed on the sides, making outside dimensions about 24x25 inches. This leaves the side walls 6 in. thick, and end walls 4, to the top of brood-nest. There it is decked over flat, allowing the whole upper part to be used for surplus for extracting. I use a super holding 14 frames; and for comb honey a crate similar to the Heddon, only it holds forty 1-pound sections, or thirty 1½-lb. sections, and can be tiered up, and the cover will shut over all, leaving an air-space all around.



EXTERIOR VIEW OF HILTON CHAFF HIVE.
During the present hot weather I raise the covers

an inch or two, which gives a circulation and permits the bees to remain in the cases. I have in my yard at this time some colonies with 80 sections nearly complete; and when they swarm, oh my! what swarms!

For wintering, when I remove the surplus in the fall I place on a Hill device, spread over a piece of burlap two feet square, and press in a cushion that just fills the upper part to where the cover comes off. This is hinged at the back, and rests on two brackets, and makes two shelves—one at the top where the smoker now stands, and one inside. The alighting-board, which is also hinged, rests on the sand or sawdust in front.

For the past five years my winter losses have averaged about 10 per cent, and my bees were never so strong as the past spring. G. E. HILTON.

Fremont, Mich., July 23, 1885.

SOME VALUABLE SUGGESTIONS FROM J. A. STAGG.

HOW TO CLEAN A SMOKER.

BORE a $\frac{1}{4}$ -inch hole in the bottom of your smoker, so that the front edge of the hole will be under the back edge of the small bent tube. Now cut a circular piece of tin about the size of a half-dollar, and fasten it over the hole by driving a tack through one edge. If the tack is driven through the edge opposite the small staple which holds the wire spring on, the L of the spring will aid in holding the tin lid in place. Now slide your lid to one side, and you can get at the tube without trouble. Why not make the smokers so, friend Root?

RED-CLOVER HONEY.

My bees, Italians, are storing considerable red-clover honey at present. "How do you know it is red-clover honey?" Because the clover-fields near the apiary are full of Italian bees; and because the honey being stored has the unmistakable red-clover flavor.

A QUEEN'S FREAK.

Last summer while attempting to introduce a young Italian queen, she took wing and "skipped out." The next day a neighbor living about a quarter of a mile distant was examining one of his colonies, which contained a choice tested queen. Upon lifting a frame he discovered two queens—one his tested queen, the other a fine young laying Italian. A careful examination failed to disclose any traces of queen-cells. I saw this young queen, and, from peculiar markings on her body, did not hesitate to pronounce her the identical queen which had escaped from me the day before.

CIGAR-BOX FEEDER.

Take a cigar-box and put in a partition $\frac{1}{2}$ inch from the front side. The partition should extend to within $\frac{3}{8}$ inch of the top. With a sharp bit and a chisel or knife, cut out that part of the bottom between the partition and front. Next cut out a square in the lid, say $2\frac{1}{2} \times 2\frac{1}{2}$ inches, and tack a piece of wire cloth over it, allowing the wire cloth to sag considerably. Now pour in a little melted wax and run it around the corners by holding the box in different positions. This will prevent any leaking. Put in a few clean shavings or cut straw to prevent the bees from drowning, and your feeder is ready for use. Cut a slit $\frac{1}{2} \times 4$ inches in the cloth over your bees; set the feeder so that the

opening cut in it will be directly over the slit, and pour in your feed. In cool weather, cover with several thicknesses of cloth or old carpet, so as to keep in the heat. This is decidedly the best cheap feeder that I have ever tried—no robbers, no drowned bees, no stings, no expense.

Greensburg, Ind., July 29, 1885. J. A. STAGG.

Friend S., we have thought of making smokers in the way you describe, but it makes them more complicated, and there will always be a chance for air getting out under that tin slide. We try to have our bellows so tight that, when the blast-tube is closed by the finger, the bellows can not be closed, even with considerable pressure; and every bellows should be thus tight to work effectively. — Where a young queen gets away under the circumstances you mention, she is liable to go wherever it happens, or where she hears bees humming. As a rule, though, they come back to the place from which they took wing.—Your feeder is substantially the one figured in Mr. Langstroth's book. You say, in enumerating its good qualities, "No expense." Were you to make fifty or a hundred, I think you would find that they do cost something, after all.

THE BRANCHVILLE CASE OF POISON HONEY.

SOME ADDITIONAL FACTS IN REGARD TO THE MATTER.

WE take the following from the Branchville Banner of July 23:

Editors Branchville Banner:—The July number of *Gleanings in Bee Culture* contains an article on the subject of the recent cases of poisoning from honey, with which your readers are familiar. There is also a letter from Prof. A. J. Cook, of the Michigan Agricultural College, who asserts that the poisoning could not have resulted from the presence of *Gelsemium* in the honey, or, if present, the drug must have been maliciously placed there.

Without being an expert in matters concerning bees and honey, the writer believes that the cases referred to in GLEANINGS, in the letter of Mr. and Mrs. Dukes, were the result of poisoning by *Gelsemium* contained in the honey, and begs to submit the following reasons for that belief. The whole question is certainly worthy of close investigation.

1. The symptoms produced by the toxic action of *Gelsemium sempervirens* are:

Diaphoresis; muscular relaxation; dizziness, and dimness of vision; dilatation of pupils; reduced pulsation; retarded respiration; absence of stupor or delirium.—*U. S. Dispensatory*.

Every one of these symptoms was present in all the cases above described.

2. Pavy says: "The honey, again, of certain countries and districts is well known to possess certain special qualities, dependent on the flora of the locality." * * * Hence also the deleterious qualities which the honey of Trebizonde, upon the Black Sea, has long been known to possess, and which are due to its collection from a species of rhododendron, the *Azalia pontica*, which grows upon the neighboring mountains."—*Food and Dietetics*.

Every one knows how the odor, the taste, and coloring matter of flowers are frequently imparted to honey. What ground is there, then, for asserting that the toxic principle of flowers can not be also conveyed to the honey?

3. That the flowers of the yellow jessamine are very poisonous, is well known in the South. One instance will suffice. Some two months since, Mrs. Clark, a Northern lady, staying in Orangeburg (18 miles from this point) gathered a large bouquet of yellow-jessamine flowers, and thoughtlessly chewed the blossoms, while walking. An hour afterward she exhibited every symptom described above, and recovered after several hours, vomiting very freely.

4. On the coast of South Carolina, and on the Sea Islands, where the jessamine grows in rank luxuriance, the poisonous qualities of honey (especially wild honey) are known to everybody. No planter or colored person dares to eat wild honey there. During the war many of the Federal soldiers, who ate freely of this honey, found out its deadly effects to their cost, although no deaths are known to have followed from this cause.

5. The honey which caused the Branchville poisoning was obtained by Mrs. Jacob Dukes from her father, who lives near the edge of a swamp where jessamine grows in great abundance, and where, during the present late spring, no other flowers, or very few, were accessible to the bees.

In the case of Mrs. Dukes, her son, and the colored children, we see the effect of a poison which is traced clearly and indisputably to the honey. This poison in its action produced every symptom of *gelsemium* poisoning, to the minutest particular. The bees did make the spring honey chiefly from the yellow-jessamine flowers; and the supposition that any one mixed any drug with this honey in the comb, is out of the question, to any one knowing the parties. Is not this very strong evidence as to the active agent producing the sickness and deaths above recorded? The strength of these facts can not, at all events, be shaken by a simple assertion or opinion from any source whatever. A. T. P.

Friend A. T. P., our thanks are due to you for calling our attention to the fact that so good an authority as the U. S. Dispensary describes so plainly the poison from *gelsemium*. As you state it, I should say there was no mistake. We have almost positive evidence in regard to the source of the honey; and hereafter when these symptoms follow after eating honey, we may be pretty sure it is owing to the presence of yellow jessamine in the vicinity. It may be, that honey made from this plant is not always equally poisonous; but in any case, where it is known to grow extensively people should be careful about eating freshly gathered uncapped honey. It would be quite a valuable point now to ascertain whether this honey remains poisonous after being thoroughly ripened and capped over by the bees.

AFTER-SWARMS; CAN THEY BE PREVENTED?

DOOLITTLE'S IMPROVEMENTS IN THE PLANS ALREADY IN USE.

WHATEVER may be said regarding the prevention of increase where an apiary is run for extracted honey, one thing is certain: That an apiary so worked as to obtain the best results in comb honey must of necessity give more or less natural swarms. I believe with many others, that just one natural swarm from each old colony in the spring will give better returns in comb honey than it is possible to get by any other mode of management; while if more than one swarm are allowed from any one colony, with such an after-swarm goes at least a half of what might be obtained as surplus; hence it becomes very desirable to prevent all after-swarms. For this reason the subject has been written about and talked upon for the past quarter of a century, and many plans of prevention given, the most of which have proven to be a failure when put in practice.

Among the plans given, two methods have stood, and are the most prominent; the first of which is the cutting of queen-cells, and the second the moving of hives from the old stand to a new. As I wish

to say a few words regarding each I will speak of the cell plan first.

CUTTING OUT ALL THE QUEEN-CELLS EXCEPT ONE.

We are told if we open the hive at any time during the first five or six days after the swarm has been cast, and cut off all the queen-cells except one, no after-swarms will be the result. If the bees desire more queen-cells they have plenty of brood yet sufficiently young from which to rear more queens. In nine cases out of ten such cells are formed, and the cell which was left is destroyed, or the young queen killed as soon as she hatches. This results in after-swarms fourteen to eighteen days after the first one issued.

Now for my improvement on this plan, which I have used without a failure for over ten years. It is very simple. Just listen a moment in the evening, at the side of a hive which cast a fine swarm eight days previous, and if the swarm issued upon the sealing of the first queen-cell (which as a rule most swarms do; there are exceptions, we all know), the young queen will be hatched, and her peeping will tell you an after-swarm may be expected the next day. Early the next morning open the hive and proceed to shake the bees from every frame in front of the entrance so they can run in, and so you can easily see every queen-cell, so as not to miss any. Now cut off every one, and you are sure of the thing. No "hope so" or "guessing" about it.

"But," says a friend, "Bro. Heddon tells us, on page 415 of GLEANINGS for June 15th, that 'if we are going to produce cheap honey at a profit we must manipulate hives more and frames less,' while the plan you give is one for the manipulation of frames."

"Have you tried Bro. Heddon's plan, as given on page 415?" I ask.

"No," says he; "have you?"

"Yes, I tried it last year, which was the poorest honey season I ever knew, and it worked in every instance, so I recommended it to Bro. Burns, of Thorn Hill, and to Bro. Nesbit. Well, this year fifteen out of every twenty so tried have cast after-swarms, while Bro. Burns says every one of those he tried has swarmed again, and Bro. N. has fared little if any better. Hence the Heddon plan goes as an entire failure in this locality, and I am blamed for recommending it. If we are to go through all the manipulation of hives, only to come to the manipulation of frames at the end of the lifting and lugging of hives, I beg to be allowed to manipulate frames without going through with the former; for the two operations can not help produce cheap honey. But, stay a moment, friend, for I have learned something from these experiments, which may be of help to the bee-keeping fraternity. It is this: Have a box or hive with the desired number of frames (I use frames of comb) in it, and when a prime swarm issues take the box to the hive from which the swarm came, setting the frames out of the box near the hive. Now open the hive and take out the frames of brood, putting them in the box. If the combs of brood seem to still be well covered with bees, and the weather is warm, shake a part of them off in front of the hive, before putting the combs in the box. If few bees or cool weather, put all in the box, setting the box in the shade, and a rod or so from the hive, as soon as all the frames of brood and the bees on them are in it. Now put the frames brought from the shop into the hive, and

re-arrange it, by which time the swarm will return if the queen has a clipped wing. If not, they are to be put back in this hive. Next put the combs of brood in a hive where you wish a colony to stand, and the next morning give a queen-cell, which will hatch in 12 to 24 hours, or give a virgin queen, which will be accepted if done at this time. In this way I secure all the advantages Bro. H. does by his plan, and make the prevention of after-swarms a perfect success."

G. M. DOOLITTLE.

Borodino, N. Y.

SOME VALUABLE HINTS FROM OUR GOOD FRIEND MRS. JENNIE CULP.

"GATHER UP THE FRAGMENTS THAT NOTHING MAY BE LOST," ETC.

FRIEND ROOT:—GLEANINGS for July 15th is received and contents noted, and I find (as is often the case) some articles which make me feel just as sister Chaddock says your foot-notes make her feel, and I have concluded to let forbearance cease to be a virtue, and "answer back." I can truly sympathize with her concerning foot-notes, and extracts published from private letters, for it makes my head swim now when I think of the "answering back" I am compelled to do on account of them.

Article II.—In your "Apology to our Ohio Brethren" you ignore the sisters, as though you did not owe them an apology too. Perhaps you are not aware that a sister nominated you for the presidency, and that the sisters helped elect you without a dissenting voice. We the "sisters" are perfectly willing the "lords of creation" shall hold the lines; but we feel it is our privilege to occasionally step out and tell you the way you ought to go.

Art. III.—A little plain talk with sister Chaddock. Allow me to say, sister C., before commencing, that I have no wax-extractor to sell, neither am I employed to puff them or any other labor-saving machine. Your article on how you made beeswax was the cause of my losing nearly a whole night's sleep. It was not the hard (unnecessary) work you had done that worried me, as much as it was your determination not to be enlightened on the subject, and vow to burn, hereafter, all the fragments of comb and wax that come in your possession. The command in Holy Writ is, "Gather up the fragments that nothing be lost," and this can be done most effectually in the bee-business. Washings of capings and honey-vessels will keep the family supplied with delicious vinegar; the old broken bits of comb-trimmings, and scrapings of hives and honey-boxes, with the use of one of A. I. Root's wax-extractors (I wouldn't be bothered with one of his 35-cent ones), will transform it into beautiful wax, with scarcely any more attention than you would give a kettle of potatoes boiling for dinner, and no muss either. I know what I say to be true, for I have used one for four years, and could not be persuaded to do without one, if I owned only half a dozen colonies of bees. The proceeds from my little apiary, in the form of wax, have netted me in the three years I have had charge of it, \$30.00. The fragments are worth saving, dear sister; but I must acknowledge to you, the wax-extractor had to be thrust upon me by a kind and loving husband, who would not consent to my musing with it in the oven, burning fingers, and occasionally spilling wax on the floor or carpet, and you know it is not like

the old woman's grease — it won't rub off when it gets dry. Your article caused me to review 24 years of happy married life, and I saw, as I never saw before, how very kind my husband had been in thrusting upon me so many labor-saving machines, and how loth I was to accept them on account of the expense (for we were poor), and yet every one of them has proved to be a benediction to me. How slow — oh how slow! some of us are to see the point as to what is best for us!

A word about the bees, and then I will try to stop. The fruit-bloom yield of honey was pretty good, enabling the bees to bridge over to basswood (no white-clover honey, as the old crop of clover was frozen out); basswood of short duration. We are not expecting any surplus this fall, unless we get it from buckwheat. I am going to be satisfied with past blessings in the honey line.

Oh, yes! I am not done yet. A word to sister Nellie — I am going to wait and see what the elder sister bee-keepers say on the Sunday bee-keeping question; and if they do not answer you to suit me, I will tell you a "real rooster story" that helped me wonderfully on that line.

Hilliard, O., July 29, 1885. MRS. JENNIE CULP.

My good friend, I am very glad that I have succeeded in making you feel as if you wanted to answer back. So it was the sisters who thought I would do for president, was it? May God give me strength and wisdom, that they may not be disappointed — By all means give us the rooster-story, Mrs. C. Why, I can imagine one thousand or more juveniles clapping their hands. Just think of it, little friends! Mrs. C. is going to give us a real rooster story, and it is something about Sunday-schools too, I am pretty sure; but she must send it right along for next juvenile, and not wait for any of the elder sisters.

SOME SUGGESTIONS AND CORRECTIONS FROM C. C. MILLER.

CAN ADULT BEES SECRETE WAX?

I DON'T know; but I can hardly see that it is proven on p. 536, as you, Mr. Root, seem to agree. I see nothing in the facts stated, to show that any wax was *secreted*, only *worked* by the old bees. Of course, you must have noticed that, as a general rule, no freshly secreted wax is used in making queen-cells. I think in all the thousands of queen-cells that have come under my observation I never saw a light-colored one unless the surrounding comb or combs were light.

BEES USING OLD WAX OVER AGAIN.

Indeed, I think bees use old wax over again much more than most bee-keepers suppose. The elder Mr. Oatman once said to me that they thought seriously of melting up their old combs and giving the colonies fresh foundation, just because, with old comb in the hive, they could not secure sections of the purest whiteness. When I used wide frames I practiced putting a brood-frame between two wide frames, with no intervening separators; and whenever they were allowed to remain thus till the sections were sealed over, or partly so, the capping was sure to be more or less dark. Sometimes the capping was uniformly dark, sometimes mottled with bits of white and dark, about half and half, but easily distinguishable; but in no case do I rec-

ollect a section of virgin whiteness sealed under such conditions. In this case they must have carried the old wax from one frame to another. Perhaps if we want the whitest sections it will pay us to remove the superfluous wax from top-bars and elsewhere. I think I get whiter sections by using Heddon's honey-board, perhaps because the bees don't like to carry the old wax so far.

A SUN WAX-EXTRACTOR.

Don't be alarmed—nothing patented, complicated, nor even original, only to show how easily it can be done. As I run altogether for comb honey I don't get much wax; but small quantities are always accumulating or wasting; and with no better convenience than the sieve and pan it has been more or less a nuisance. For some time I have been noticing the advertisements, to know what kind of wax-extractor to buy; but the trouble with all was, that fire heat must be employed, and I wanted something that would take care of itself, by my merely throwing in the scraps. So the other day I gave Charlie instructions to make one. He took a box 2 ft. long, 2 ft. wide, 1½ ft. deep (I don't think the size essential, but he happened to find one of that size), put a shelf in it on which was placed an old black sheet-iron dripping pan. One corner of the pan was split open, and the pan (or, rather, the shelf) very slightly slanted, so that, as the wax melted, it would slowly run out of the open corner, and under this corner was placed a stone crock holding one or two gallons, and nearly filled with water. The box was made bee-tight, and covered by a window-sash that had been lying idle in the cellar; and as the sash was too large for the box, boards were nailed on two sides of the sash, to make it fit. That's all there is of it—an old box, dripping-pan, window-sash, and stone crock. Not an ornamental thing, by any means, but it does nice work. All that is needed is to throw the scraps into the pan, and the pure wax drops into the crock, leaving the sediment on the bottom of the pan. It runs only in the middle of the day; but Charlie hastened it very much one day by putting a looking-glass so as to reflect the sun upon it. I don't know that it would do for large quantities, but I have got three or four pounds of very nice wax from it.

GETTING WAX FROM OLD COMBS.

One would almost infer from Mr. Swinson's experiments on page 533, and your comments thereon, that a frame of comb after being in use ten years had absolutely less wax in it than when first made. I doubt this. I don't think the wax evaporates; and after the first cocoon is left in it, the bees can not get at the wax to take it away, except at the edges of the cells. I think less wax is usually *obtained* from old comb than from new; but the wax may be there for all that. Suppose you try this experiment: Take an old black comb; cut or break it in two; and when tolerably warm, mash up the one piece into a solid ball, and, leaving the other piece whole, place the two where they can have the full benefit of the hot sun for some days, or give them a slow fire heat. The piece left whole, if the heat has been strong enough and long enough, will be found scarcely any thing but dry cocoons, easily pulled apart; whereas the other will still be a solid ball with much wax in it, and I doubt if you can get it out. Burn each in the fire, and see the difference.

C. C. MILLER, 179-340.

Marengo, McHenry Co., Ill., Aug., 1885.

Thanks, friend Miller, for your correction.

I agree with you in what you say; for I have observed the same many times. In fact, I have seen pieces of new dark comb as large as my hand, because they were built between two old black combs. I am glad you have suggested this caution in regard to getting our comb honey capped with white cappings. Your suggestion, that we get whiter comb honey by using the Heddon honey-board, is new to me. I have been struck with the remarkable whiteness of a large lot of comb honey just purchased. It was secured by the Heddon system.—Thanks for your report in regard to the sun wax-extractor. In getting wax out of old black combs, don't you think a wax-press described in the ABC would get it out pretty nearly?

OLE FOGY NOT DEAD YET.

HIS OPINION ON CLIPPING QUEENS, ETC.

BRO. ROOT:—I quote from page 523, Vol. 13 of GLEANINGS: "Friend S., in regard to bees always alighting, that sentence caps the climax in helping us to decide that you are greatly given to notions. Have you forgotten the perfect hailstorm of facts rained upon the head of poor Ole Fogy a year or two ago, and the way in which we made him come out of his cover and own up and take back his words?"

Now turn to page 741, Vol. 11, and read Ole Fogy's last article that he ever wrote on that subject, and your own inevitable foot-note thereto, and I fancy somebody else will have to "own up and take back." That hailstorm of facts you speak of was a very small matter, only a mist that nobody feared. Oh, no! I still hold the fort, and expect to hold it till there's a stronger battery opened against it than ever has been yet. I took the position, that a natural swarm issuing *for the first time from a hive, in a normal condition*, never, never, never goes off without first settling or clustering, *providing always that there is a decent place convenient for them to settle on*. I'm on that platform yet, and will stand on it till it falls; and I am happy to know that the number is growing beautifully smaller and smaller every year, of those superstitious people who think they must be on hand when their bees swarm, to make all the noise and confusion they possibly can with horns and bells, tin pans, and even looking-glasses and shot-guns, to keep their bees from going to the woods "mit out settlin." Others, again, just as unreasonable, but ashamed, perhaps, to be making such a racket for their neighbors to hear, quietly go to work and cut off the queen's wing so she can not fly; and don't you know that, if you have your queen's wings cropped you have got to watch them closer than if they were not cropped at all—I mean in swarming time? I want no cropped queens in mine; do you hear?

OLE FOGY.

Allendale, Ills., Aug. 5, 1885.

Friend F., it seems as if there were a couple of us who have been careless or forgetful. While you have Vol. 11 in hand and open, reading p. 741, just turn two leaves more and read page 745; also notice below, the "foot note."—In regard to the editorial you refer to, please notice that friend Salisbury says, "*Bees always alight*." He doesn't specify first or second swarms, or name any condition, as you do.

MY EXPERIENCE WITH THE BEE-POISON.

BY REV. L. L. LANGSTROTH.

IN 1838 I put two colonies of bees in an attic closet, but I made no experiments of any kind with them; they were simply looked at and admired. In 1839 I fairly began my apiarian career, and soon found that to experiment much with bees, meant to get many stings. At first these were not only quite painful, but caused severe swellings. I dreaded to be stung the latter part of the week, for often one eye would close and the other nearly so, and to preach in such a condition was by no means a pleasure. If stung on the hand, my whole arm would swell so rapidly that if my coat was not seasonably taken off, it had to be ripped off. In short, I was a regular martyr to the bee-poison.

My second year's experience was much more favorable, and in the course of a few years I became almost bee-proof. In the pressure of business, and my zeal for studying the habits of the bee, I preferred to be stung occasionally, rather than to lose time by wearing a bee-hat. The pain of a sting was seldom very severe, and not often caused much swelling. My experience was the same with that of most bee-keepers who had persevered in spite of stings, until at last their systems became accustomed to the poison.*

A few facts out of many that might be given: I once agreed to help a farmer to move a hive to a new location. He assured me that the bottom-board was securely fastened. It fell off before we had got more than a few steps with our load—covered with bees, some of which were crushed—and the air at once was filled with the enraged insects. The farmer dropped his side of the hive and ran away; it fell against me, but I held on until I lowered it to the ground; and then made the best of my way into the house. Perhaps a hundred or more stings were pulled out of my face and head! and yet in a few hours one could hardly have noticed that I had been stung at all. When visiting that great man, Dr. Jared P. Kirtland, of Cleveland, Ohio, he wished me to examine with him a colony of bastard (hybrid) bees. The doctor was armed with bee-hat and gloves—both of which I declined to use. We quieted them pretty well with smoke, when he began to discuss some point in bee culture with his usual animation. Soon his gesticulating hand was doing quite a business, the bees became furious, and paid all their respects to me; and how many stings were pulled out of my face and head I can not tell. As soon as this extracting work was over, I said: "Doctor Kirtland, I protest against all eloquence in the vicinity of bee-hives—especially when you are clad in proof armor, and I have none!" Although ever so well stung, the pain was soon over, and in a short time no visible proof remained that a bee had stung me.

In 1874, after the death of my son, my health became so impaired that I sold all my bees. The next spring an entire change seemed to have come over me with respect to the bee-poison. I first noticed it in extracting some stings with the poison-sac attached, for a friend who wished to procure the bee-poison in a perfectly pure state. I had noticed at

*The Austrian who came over with Mr. S. B. Parsons' Italian bees, when stung, would leisurely take out of his pocket a vial to anoint the sting with his favorite remedy! Seeing how indifferent Mr. Cary, myself and others were to stings, he soon ceased to produce the vial.

the beginning of each year's work among my bees, that the poison affected me in various ways, and my wife would often have to awaken me when she heard me unconsciously moaning in my sleep. The night after pulling out these stings, this moaning became so pronounced as to awaken the friends with whom I was staying, and alarm them with the fear that I was dying. Intense dryness of the tongue and fauces, accompanied sometimes by what seemed to be an aggravated form of heart-burn, smarting of the eyes, a heavy, drooping sensation in the eyelids, breaking out of fiery spots over various parts of my body, a disposition to almost tear the flesh of my cheeks, dreaming of the most excited kind, full of violent motion — these and many other symptoms were of frequent recurrence at the beginning of each bee-campaign.

After getting the medicinal bee-poison, as before recited, the effect upon me was so severe that I became really alarmed, and earnestly sought to protect myself against any recurrence of such unpleasant symptoms. I soon found this was next to impossible. To converse with those fresh from handling bees — nay, even to receive letters or postal cards from them, was to be poisoned again.†

Ten years ago, being at my old home in Greenfield, Mass., I engaged to visit my friend Wm. W. Cary, of Coleraine, one Saturday afternoon, intending to preach to a congregation where for some years I had served as their pastor. The day was a charming one, and I was quite happy at the thought of meeting so many old friends. Mr. Cary had been handling bees all day, and was well charged of course with the bee-poison. Almost as soon as he had shaken hands with me, my eyes began to smart, my eyelids to feel heavy, and my face to itch. My spirits sank at once, and the thought of preaching and seeing my old friends caused me only anxiety; in short, the very bottom of all hopefulness seemed to drop out, as it were, in a few moments. Explaining my reasons, I sought other quarters, but the pleasure of my visit was essentially spoiled. Imagination! I hear some one saying. Does imagination cause burning eruptions on the body, constant roaring in the ears, as though near a waterfall, to say nothing of moaning in sleep, etc.?

From 1875 to 1881 I dreaded the return of each bee-season. My letters were all read by some member of my family, that I might handle none from bee-keepers. I felt that, let my general health be what it might, I could do nothing more with bees. While I could easily trace much of my suffering to the bee-poison, I could not believe that it was the cause of the head trouble from which I have suffered so much, for I was a frequent martyr to this many years before I kept bees. Now, had I given my experience with the bee-poison from 1875 to 1881, I should have left the matter in such a shape as to prejudice many against having any thing to do with bees. I should only have given the actual facts in my case; but for want of other facts not then duly weighed by me, my facts would have seemed to warrant inferences just the opposite from the truth.

In the spring of 1881 my health being more fully restored than for some years, it seemed to me almost an impossibility to keep longer away from the bees. A new thought suddenly occurred to me.

†The susceptibility of some persons to the bee-poison, seems to be as great as that of others to the poison-ivy. I can handle this with impunity, while I have friends who can not get near enough to it to see it, without being poisoned by it, if the wind blows to them from it!

Suppose a person after long use of tobacco or opium should give them up for some time — long enough for the effect they produce to pass away — and should then attempt to take the old, big dose! would he not be naturally alarmed at the result? May I not be mistaken, then, in supposing that any great change has taken place in my system, as respects the effects of the bee-poison upon it? and may not my painful experiences of the last six years be accounted for in another way? So long as I kept bees and dealt so largely in queens I was compelled each year to inoculate my system so fully with their poison, that however severe the ordeal at first, I soon became indifferent to it. Now being under no such necessity, I stop short every time of full and repeated doses. Suppose that I take such doses again. With fear and trembling on the part of my family, but with scarcely any on my part, I determined to test the matter, for as even the presence of freshly extracted honey in the house was enough to bring on another attack, I felt that I must get out of the world before I could escape from this dreaded poison. I determined, therefore, to make full proof of my new theory. Without any bee-hat, I helped my friends to extract their honey, all the time saying to the bees, "Sting me as often as you please;" and as they were gentle Italians, I did not scruple by somewhat rough treatment, to make them do much more than they naturally wished to, in the way of stinging. From the very first I did not suffer nearly as much as I had done every year since I ceased to work with bees! and little if any more than I had done every year when first handling them. In about a week I was again bee-proof, and launched out at once into a course of experiments (all in vain) to control if possible the impregnation of queens.

How can I ever describe my delight in handling again the movable frames! In the apiary of a neighbor, Rev. McGregor, I fully proved that with small strips of foundation for guides, I could use my comb-guides, or guide-frames, and secure from Italian bees the same perfect worker-combs that I used to get with these guides from the black bees; thus realizing a favorite idea of one of our greatest bee-keepers (Doolittle), viz., getting perfect worker-combs with the least use of foundation.

While handling frame after frame of such combs, and feeling as much enthusiasm as I did in 1853, when I first saw that the bees would follow the triangular comb-guide, I explained to the Rev. McGregor (apologizing for the seeming play upon his name), I must make those words of Rob Roy in Scott's novel, my own: "My foot is upon my native heath — and my name is McGregor."

Unquestionably some persons are so extremely sensitive to the bee-poison, and so dangerously affected by it, that under no circumstances should they keep bees. To such persons my experience can be of no service.

Oxford, Ohio.

Friend L., the facts you furnish us in the above article are indeed valuable. You may be perhaps aware that others have been affected by the poison of the bee-sting in the same way you mention—among them friend Heddon. Now, is it not probable that a good stinging might so inoculate friend H. that it would set him all right? The remedy might be in some respects a bold one; but if it were my case I think I would risk a

trial of it. If I understood you correctly, it is now your opinion that, had you at any time, while you were thus affected, been stung enough so that your system had become thoroughly inoculated with the poison, these bad symptoms would have disappeared. I am inclined to think that giving way to these feelings has often a good deal to do with it.

BEE BOTANY,

OR, HONEY-PLANTS TO BE NAMED.

HYPTIS EMORGI; A GOOD REPORT FROM THE PROCEEDS OF ONE COLONY.

I SEND you a specimen of a plant. It is a shrub or bush 4 to 10 ft. in height, with 50 to 100 shoots, from the size of your fore-finger to the size of your wrist, making a dense bush from 4 ft. to 10 ft. across the top. It has fine light-green twigs like knitting-needles, and long slim needle-like leaves of a very bright light-green color, which enables you to distinguish it from other shrubs at a great distance. It comes in bloom about the first of Oct., and continues till near the first of Nov. The bees swarm on it and roar like a swarm. However, they can not gather honey so fast as from bass-wood; but they store so much honey, that I had to extract twice while it was in bloom to give the bees room to raise brood.

I have kept bees in Missouri for 12 years, and have investigated Arkansas and Kansas. I have read the honey reports in the bee-journals for 20 years, but have never read, or heard of anything, or place, that will compare with this for bees and honey. Who ever heard of 14 swarms, and 600 lbs. good thick honey that weighs 12 lbs. to the gallon, from a start of one weak swarm in March? This, too, by natural swarming, and without the use of comb foundation, or any unusual exertion.

Tempe, Arizona.

JNO. L. GREGG.

The plant from J. L. Gregg is *Hyptis Emorgi*, Torr., belonging to the mint family (*Labiata*), to which so many of our best honey-plants belong. Its late blooming must make it valuable for bee pasture. I think it has never been found east of the Mississippi.

W. S. DEVOL, Botanist.

Ohio Ag'l Exp't Station, Columbus.

FETID MARSH-FLEABANE.

I send you by this mail a weed, called here polecat weed.

E. A. BUTLER.

Terry, Miss.

Plant sent from Terry, Miss., by Mr. E. A. Butler, is the foetid Marsh-Fleabane (*Pluchea foetidus*, D. C.). This and allied species are found generally distributed throughout the eastern, southern, and middle United States, some of them in salt marshes and others in fresh-water marshes and along the banks of streams and shores of ponds, the above-named species being one of the latter class. Like most of the order *Compositae* it blooms rather late in the season—August to October. It grows 2 to 5 ft. high, minutely pubescent and glandular; leaves opposite, 5 to 8 inches long, coarsely serrate, resinous dotted; the small numerous heads of purplish flowers on slender pedicels are clustered in a panicle or paniculate corymb.

Columbus, O.

W. S. DEVOL, Botanist.

MOUNTAIN SPINACH.

I was advised to send you a specimen of something that grew in my flower-bed. We supposed at first it was some of the seed I had sown. It had at first a faint resemblance to sunflower, and grows seven feet tall. The plant was examined by a great many, and no two agreed as to what it was.

Marengo, O.

MRS. ABBEY A. SHERMAN.

The plant from Mrs. A. A. Sherman is Orache, or Mountain Spinach (*Atriplex hortensis*). It is a hardy annual 2 to 3 ft. high, very popular in France, into which country it is said to have been introduced in 1548. It is little grown in the United States, but seeds freely, and in some gardens becomes a troublesome weed.

W. S. DEVOL.

Columbus, Ohio.

Please name, and tell how inclosed plant ranks as a honey-plant. It is known here as a bad weed in young corn, and is called "Torment," or wild mint. Dorchester, Mo.

WILL T. ZINK.

The specimen from W. T. Zink belongs to the mint family; from the small cluster of leaves sent, and no flowers, I am unable to determine the species. If Mr. Z. will send specimen when in bloom I will endeavor to name it for him.

Columbus, O.

W. S. DEVOL.

PRIVET.

I send a specimen of a shrub now in bloom, which is every year covered with bees, and doubtless yields much honey. Will you please name it for me?

S. W. MORRISON.

Oxford, Pa., July 9, 1885.

Specimen of flowering shrub from S. W. Morrison is Privet, or Prim (*Ligustrum vulgare*, L.) found in woods and thickets in N. Y., Pa., Va., and westward to the Mississippi River, supposed to have been introduced from England, but this is doubtful. It grows 5 or 6 ft. high, and bears numerous small, white flowers.

W. S. DEVOL.

Columbus, O.

T. LANCEOLATUM; A FIRST COUSIN TO THE BASTARD PENNYROYAL.

Inclosed please find another specimen of the honey-plant I sent you for identification. The corolla is too deep for the bees to get the honey in the usual way, so I went to see how they did get it. The bee catches hold of the flower, and presses with his tongue and fore-feet at its slender neck, till it cracks enough to get his tongue in; then he slides it like lightning along to the honey. It was funny to see how eagerly he would slide his tongue along to the honey when he once got in. They did not appear to be able to get into some of the blossoms. This was something new to me, and I hardly knew whether to believe the bee made the crack or not; so I tried it with the point of my knife, and I found they would crack at the neck with a very slight pressure. Some would not crack at all; these may have been too old and not brittle enough. We sow wheat and oats for hay, and mow it in June. After a month or so, this plant comes up as thick as it can stand and lasts two or three months.

Soquel, Cal.

HENRY R. DAKIN.

The pretty little plant from H. R. Dakin is a species of blue curls (*Trichostema*). It is known to botanists as *T. lanceolatum*, Benth., and is a first cousin to the bastard pennyroyal so often spoken of in this department of GLEANINGS. It is a strong-scented herb with a soft pubescence covering the

whole plant; leaves about an inch long, entire; flowers purplish, borne in axillary clusters; stamens long exerted, curled. It is quite an interesting plant, about a foot high, the stems very leafy. Another species is found in the same vicinity, which strongly resembles this one, but the leaves are further apart on the stem, and the odor differs slightly.

Columbus, O.

W. S. DEVOL.

MODERN TRANSFERRING.

FRIEND HEDDON'S METHOD.

IN response to your request I will tell you how we proceed to transfer bees from mixed styles of hives to our own favorite hive.

About swarming time I take one of my Langstroth hives, containing eight Given pressed wired frames of foundation, and, with smoker in hand, I approach the hive to be transferred. First, I drive the old queen and a majority of the bees into my hiving-box. I then remove the old hive a few feet backward, reversing the entrance, placing the new one in its place, and run in the forced swarm. In two days I find eight new straight combs with every cell worker, and containing a good start of brood. Twenty-one days after the transfer I drive the old hive *clean* of all its bees, uniting them with the former drive, and put on the boxes if they are not already on. If there is any nectar in the flowers, this colony will show you box honey. I run them together as I would one colony in two parts. Now to the old beeless hive. Of course, there is no brood left, unless a little drone-brood, and we have before us some combs for wax, for more foundation, and some first-class kindling-wood.

If you have no method by which you can use a full hive of frames, of full sheets of foundation, running a full swarm into them at once, by all means procure it without delay. But if any one has a mania for cutting up combs and fitting them into frames, my method given above does not prohibit them from using all the straight worker-combs the old hive contains, after first extracting the honey from them. Should any one wish to increase his colonies at the same time he transfers, only the following deviations from the above are necessary: Run the second drive into another hive of full frames of foundation, and use the old hive as before. Now that we have foundation perfected, so that the bees will draw the lines or side walls to full breeding depth, in from two to three days, why fuss with the old comb from the old hive? Having once experienced the advantages to be attained by using the above method, I shall certainly never go back to the old one. All of you know what a nuisance a few odd-sized hives are in the apiary; also some who have just started wish they had adopted some other style of hive. The above method of transferring will get all such out of their trouble.

The cost of foundation and new hives is fully made up by the better combs, and you have the change to better style of hive thrown into the bargain. I have thoroughly tested the results of the plan herein described, and am speaking from experience.

We have just practiced the above upon 72 colonies, and without a failure or mishap of any sort. I purchased 16 colonies of bees; that is, I purchased the bees, brood, and honey, with the agreement that I should return the hives and empty combs,

which I have done. We made each one cover two sets of combs in two brood-chambers, with two queens, besides the surplus sets used above for extracting, and all are rousing strong. When you plan to double your colonies, you remove the old colony to an entirely new location, when you make the first drive. It is now my opinion, that, even without the use of comb foundation, in the days when we had none this plan of transferring would have been the preferable one. As we are cutting out the old combs for wax, we transfer any that we find, that are *perfect*, now that they are all clear from bees, honey, and brood. JAMES HEDDON.

Dowagiac, Mich., Aug. 6, 1885.

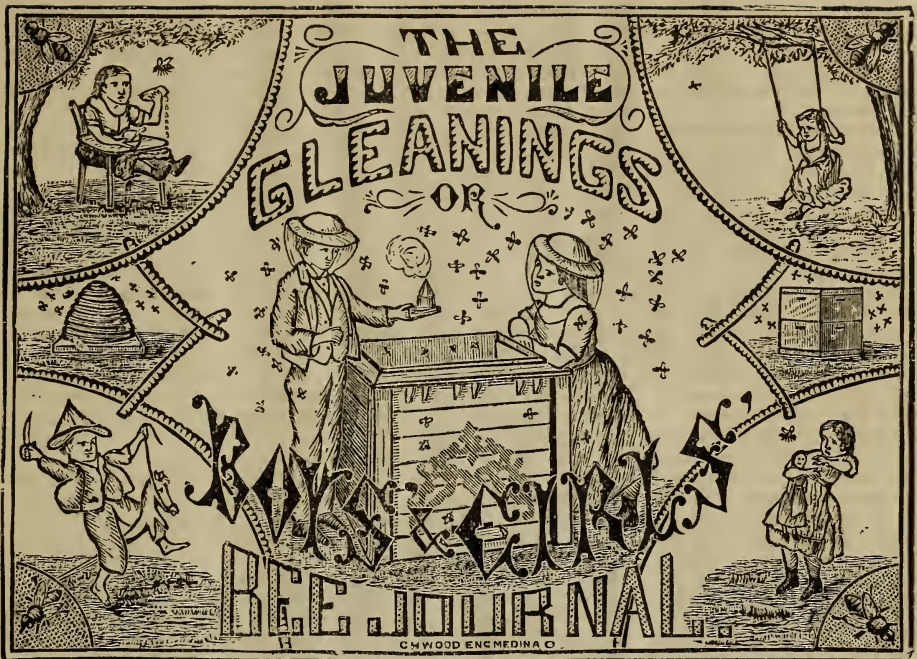
Friend H., in your concluding sentence, "Clear from bees, honey, and brood," I can readily understand how you are clear of *bees*, and, after the last drumming-out, clear of *brood*; but, how about the *honey*? Old box hives at swarming time, in our locality, are usually heavy with honey; and one great obstacle in the way of your method is some way of disposing of this honey. There is also more or less freshly gathered pollen, which we here consider worth even more than the honey, early in the spring. I presume enough of the old bees will go back into the hives to care for the unsealed brood, so that none of that is lost. The point you mention, of getting rid of the dauby and troublesome process of fitting old pieces of comb into frames, and fastening them by means of splints, transferring-wires, etc., is, I grant, a big step ahead. We decided long ago, in our own apiary, that we wanted no more combs at any price, that were not built on frames of wired foundation.

INTRODUCING VIRGIN QUEENS.

AFTER I saw G. M. Doolittle's article on introducing virgin queens, in Aug. 1st GLEANINGS, and as I had such a splendid opportunity to test it, I prepared to my nuclei this morning, and will give you exactly what I experienced on July 31st. I introduced 21 virgin queens to nuclei that had their queens taken away the day before, excepting three that had been queenless for several days. Of those virgin queens some were caged 15 days in the nursery, and some were caged only 3 days. I let them run in at the top of the hive, and they were, to all appearances, safe when I left them.

To-day Aug 5, I examined the nuclei, and found 9 missing from the 21. One of the three that were several days queenless accepted the one given them; the other two killed theirs. I found only one of them laying. Only one of the queens had her wings injured so that she could not fly when taken from the nursery. I destroyed her. All the others were fine large queens. About two weeks ago I tried another lot. The queens were just a day old, and the nucleus had been queenless about 2 days. I lost only two, I think, out of about 15, and some that had just hatched were accepted at once. I believe the action of the queens has every thing to do with safe introduction. I let one into a nucleus and she set up a terrible piping, as much as to say she was ready to fight any thing. The bees accepted her at once. Had she started to run she would have been killed. W. J. ELLISON,

Stateburg, S. C., Aug. 5, 1885.



He that is faithful in that which is least, is faithful also in much.—LUKE 16: 10.

MYSELF AND MY NEIGHBORS.

If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not; and it shall be given him.—JAMES 1: 5.

WHAT a grand thing is wisdom! I shall not take space this morning to illustrate how true is our text, to any great extent, but I shall confine myself mostly to showing you the importance of wisdom. Let me give you a little sketch of my dealings with my neighbors for the past twenty-four hours. While I was out in the field, a man came along wanting my name on a paper. The undertaking was a grand one, and I could wish it God speed with all my heart. But it was something out of my line of work, and I asked why he wanted my name first. He said he wanted it started by a man universally known in our county, and one who is known to be straight and upright in business, etc. He urged that my influence might help him greatly in getting the good cause started. I hardly need tell you that I am opposed to putting my name on any paper carried by a stranger. He showed me similar papers that had been carried around in other counties, and I pronounced the signatures genuine, and as belonging to the best men I know of, many of them; but I objected, until I knew more about him and the new movement. He asked me what he should do to remove my objections. Here is where I wanted wisdom to answer. I finally told him that, if the pastor of our church, and the deacons of our church, would give it their sanction, I would, if he

wished, head the list. Was it a wise thing to do? I thought so, and think so still. The pastors of our churches, and the deacons, are the best counselors I know of in the world, especially in a matter like the one presented.

We have been having exceedingly wet and rainy weather. Farmers all around are worrying about their grain, and the thrashing-machines have not yet got started, because, just as soon as the grain begins to be so it would answer tolerably well to thrash, it rains again. Thrashers were coming tomorrow, and my four acres of wheat and rye would do pretty fairly. But just at dusk one of my near neighbors, who has thirteen acres of wheat, and who makes farming his business, called in my absence to inquire if I couldn't possibly let the thrashers do his grain first. One of the boys said he would present the matter to me when I came home from the railroad meeting, and then added: "Now we will see whether Mr. Root loves his neighbors as himself."

On the way home from the railroad meeting my neighbor met me. The question came as before, "What ought I to do?" What would a wise man do under similar circumstances? I told him to tell the thrashers that they should do his first (you see I did not know they were watching me to see how my *Christianity* would hold out). He had a good deal more than I had, and he has been a very kind neighbor, and I felt it a privilege to do him a favor. It is true, it rained before the thrashers got through with mine; but I have not been

sorry a bit. In fact, I felt glad to think my neighbor got his thirteen acres secured in nice shape. They commenced on mine about four o'clock. There were indications of a storm when we got started. If nothing happened we would get through before dark and before the storm. One of our best men, and one who usually handles the team, said he could pitch it on faster than the boy who was pitching it, if I thought it best for them to swap places. The boy, although a splendid one for any kind of hard work, was not much used to handling a team; and, against my better judgment, I consented to letting him load and *drive*. The load was on, and they were hurrying to reach the machine before the other load was off, when he uncautiously drove near where an under-drain had been made some time before. The wagon-wheels cut into the soft damp ground so that the load was stuck. The storm and night had almost come. What did wisdom dictate? My decision was to stop the machine, drive the other empty wagon alongside, and pitch off part of the load. One of the men belonging to the machine said he could make that team pull that load out of there. He worried the team, strained them to their uttermost, broke *two* whiffletrees, and even then did not get it out. Another man said *his* team would pull it out. I begged to have the empty wagon run down and take it slowly but *surely*. The new team broke the harness; and when they got it fixed, the horses got discouraged and would not try any more. Then scantling and plank were carried to pry the wheels out. After a delay until it began to sprinkle, indicating the coming of the storm, my plan was adopted. Now, I am very well aware that many good teamsters (which I am not) will often get a load out by *making* the horses take right hold of it when they think they can't do it; in fact, I have seen a good many loads pulled out, when I should have gone for another wagon. But all things considered, I like my way best. I do not like to see horses whipped, nor made to strain themselves to their uttermost. How often a little wisdom will help the work along! In this case a lot of hands stood idle a long while, while the rain came up and night came on, which might all have been avoided had I listened to the convictions of my best judgment, and not intrusted any one but an experienced driver, and one who knew the "lay of the ground." When the rain began to come down so as to make sure that the work must be stopped, all hands turned in and worked like "beavers" in loading what we did not get thrashed, on to our three empty wagons, and pushing them into sheds and warehouses, until by eight o'clock our grain was all secure. Men and teams worked hard, and strained every nerve, without supper or feed, until my property was secured. We are all human, and we all lack in judgment many times; but as I went to bed that night I had reason to thank God that our little band during that emergency were *honest* and *true*, for not even the smallest boy had shown the least bit of objection to their severe hard work, without a bite of supper until long after their usual time.

This morning our colt "Nancy" is sick. She probably worked too hard, especially as it was slippery and severe on a horse without shoes. Some of the friends declared that I had better send for a "horse-doctor." Now, then, where is wisdom once more? If I knew of an *educated Christian* man who has a good reputation for doctoring horses, I should gladly send for him. Do they have such in your neighborhood, friends? I considered the matter a while, and finally declared that if Nancy were going to die, she should die in the natural way, and not from the effect of powerful drugs which I have often seen administered to sick horses, and the poor dumb friends died after all. "Even the most powerful kinds of medicine wouldn't save them," so the horse-doctor said. Now, dear friends, very likely I have not any great stock of wisdom; but this one thing makes me feel happy: I am searching diligently for wisdom day by day; yes, pleading the *promise* God has given at the head of this little talk.

P. S.—Nancy is dead! When it was certain that her malady was no trifling one, I sent for our family physician and two or three men whom I knew to be conversant with horses, and more or less accustomed to handling sick horses. I was pleased to know that the doctor had once studied as a veterinary surgeon; but he frankly admitted that it is often very difficult indeed to decide what is best to do with a sick horse, and he is as much opposed as I am to guessing at the trouble and then administering powerful drugs. Many times relief is given by mechanical means or appliances, and of course we should always spare no expense in availing ourselves of the most intelligent and experienced help in saving these dumb friends of ours from suffering. But let us hope that the age is fast passing away, of *guessing* at the trouble and then *guessing* again that something that would kill a well horse might possibly hit the trouble and correct it.

HAVING FISH FOR PETS.

SOMETHING ABOUT HOW TO KEEP THEM IN THE HOUSE.

WHEN I was young, and did not have much to do, I loved pets of all kinds; but my favorites now are fish, and I nearly always have some of one kind or another. As I write I can look up to a shelf by a shady window and see four lovely carp in a five-gallon demijohn. It is clear and nice, and the fish look as if floating in air. The bottle is two-thirds full of water. The largest fish is about four inches long; but in the bottle he looks to be six inches. I prefer a bottle to a globe, because they hold more water, and so it does not need renewing so often.

The first week after putting the little fellows in their cage you must change the water four or five times a day; but after that they will not need changing oftener than once a week. You can always tell when to change the water, for they will put their noses out of it and hang their tails straight down and float around that way. Do not put the coldest water you can get on carp, but let it be with the first chill off, or it will stiffen them right out

and they will not live so long. Be sure not to feed them; if you do you will have to change the water every hour, and they get so uneasy that they are no pleasure to look at. They get enough animalculæ from most waters to keep them. We kept two in a tank where the water was run off on to a strawberry-bed once a week; and when we wanted the water for drinking we killed the fish. One was full of spawn, and the other was fat. They had been in about eight months, and had grown considerably. The well water was beautifully clear and sweet, so they must have lived on the animalculæ, for there was nothing else that we could see; and, in fact, we did not see them; but scientists say that the water is full of them. I take their word for it without looking, as I know I could not relish the pure, clear-looking water if I had seen bugs and snakes in it.

The largest of my pets loves to jump. He will start from the bottom of the bottle and rush to the top of the water, and spring quite to the neck. His fins will make quite a noise as he strikes the glass. I thought he was after flies; but I caught and killed a couple and dropped them into the water, and they would never touch them.

Minnows make nice pets, and they will catch and eat flies, and in a short time you can teach them to come to the top of the water for food; but you must have lots of water and very few fish, to be nice. I have kept two fish, about two inches long, tail and all, in a half-gallon Mason jar, for a year. A candy-jar is prettier, as it is clearer, and they will pay for the trouble. Of course, gold-fish are the prettiest, but they are not always obtainable, and they are not so active as carp or minnows.

Little folks, try one glass of fish for pets, and you will be delighted with them as soon as they get accustomed to their new home. Mr. Root thinks may be the hot spring would be a good place for carp. I do not know if they could stand the sulphur; but if they could, wouldn't it be nice! The pond could always be kept warm by the water running into it, and they love warm water.

Some one made an incubator—that is, a machine to hatch eggs—and put it where the hot water could run through it, and I heard that it hatched out the eggs nicely. I want to go and see it; and may be I will some day, for I love to work with chickens. Light Brahmas are my favorites, but we are trying Plymouth Rocks this year, and we have an incubator that we are getting ready to set, and, of course, I am interested in all such things; but we can not all have hot-spring incubators. We all can have carp, or fish of some kinds, however, even if they do not bring us much money. When Mr. H. was at Santa Barbara last week, he and a friend went up to the Old Mission, and they saw a large reservoir back of the building. They went to it and saw a lot of large carp in it, and they were so tame that they followed them all around the reservoir, looking for something to eat. The men hunted in their pockets for some crackers; but not finding any, Mr. G., who uses tobacco, crumbled off some and threw that in. The fish would take it in their mouths and then spew it out again. The men had a good laugh at their evident disgust at the uninviting repast.

J. P. Israel's piece is very amusing. We hope he will come again. We think C. C. Miller will have to hire a cheap boy, to hunt out the especial items for him—one who does not care to read much, and would go by the headings. I suppose he finds the extras so interesting that he forgets all about what

he had been wanting. I read every thing in GLEANINGS, although I am not financially interested in bees, and am not very good friends with them any way; but even the bee-articles are so spicy that I would not miss them for a considerable. But I prefer the carp and chicken stories, and especially the Homes and comments.

AUNT KATIE.

Los Alamos, Cal.

Thank you, Aunt Katie, for the instruction you give in regard to keeping fish in the house. A friend was down to see our carp-pond a few days ago, who said that a carp-raiser made his wife a present of two little fish not larger than a cucumber seed. They fed the fish on small particles of oatmeal, and he said that they doubled in size in only three or four days. Such pets are not only amusing to the children, but they are instructive. You, my friend, have learned that fish can live in a glass jar without being fed, etc.; and it seems to me that all the knowledge we gain of this kind, by practical observation and experience, helps us along in the world. When poor Nancy was sick, oh how I did wish that I knew more about horses, that I might be able to give her at least a little intelligent relief from her sufferings! When the man who took care of her came into the stable in the morning, even though she was too nearly dead to notice any thing she looked at him and whinnied.

THE TROUBLE THEY HAD AT CHARLEY'S HOUSE.

WERE THE BEES ROBBING, OR WHAT WAS THE MATTER?

THIS has been a poor season for bees so far. It has been cold and rainy. Our principal honey-plants are white clover, basswood, poplar, locust, willow, maple, and buckeye. We can tell when our bees are working on buckeye, by the bright-red pollen they gather from it. Basswood is plentiful in our vicinity. Maples are numerous in the swamps. The bees gathered lots of maple pollen in the spring. Mustard, teasel, goldenrod, dandelion, and pennyroyal are also plentiful. Figwort grows wild in the woods. Last spring we saw the bees of one of our large colonies rushing in and out at a terrible rate. Supposing that a neighbor's bees had overpowered it, we shut it up, and to keep them from robbing our other colonies we shut them up also. Soon thousands of bees gathered over the hive we supposed was getting robbed, and a smaller number on the other hives. The day was a warm one, and late in the afternoon we opened the hives. The bees that were on the outside were gone. Now, what became of those bees? This is a question that I do not see into. The next morning all the bees went to work, and the swarm we thought was robbed soon filled their hive, made some surplus, then cast a fine large swarm. What were these bees doing that day? Could it be that they were taking honey from a bee-tree? and if we have any more such experience, what shall we do?

Our bees at present are working on white clover. We have the A B C book, and I like very much to read in it.

CHARLEY L. GREENFIELD, age 13.

Somerville, Ohio.

Friend Charley, your bees were out having

a playspell, and you are not the first one who has been misled in just that way, as you will see by the A B C book. When you shut up the hive, the young bees that had for the first time in their lives been out trying their wings were compelled to cluster outside of the hive; and after they had watched a sufficient length of time, and nobody came around to let them in, I suppose they went to other hives, probably attracted by the humming of the returning bees toward evening. The smaller number you saw on the hives not shut up were the young bees going to the hives because they could not get in at home. Young bees out on a playspell will usually be permitted to pass without hindrance into any hive, just as you would let a baby right into your house without any objection, if it should happen to wander away from its own home. If you watch carefully you can tell robbers from bees having a playspell, by noting their behavior. The playing bees dance up and down in the air, seemingly, and they also have a brighter look than old bees, being lighter colored on account of the soft down that covers them about the time they take their first outdoor flight.

TOBACCO AND SNUFF.

ALSO SOME FACTS ABOUT ANTS IN THE SOUTH.

SEEING you have not disdained to publish my little report, encourages me to appear before you again in a social sort of way. The letters in GLEANINGS, as a rule, are so homelike and chatty that one is naturally impelled to be sociable in adding to them. In reading them I frequently feel inclined to have my say—so on some of the points talked of; though as regards bees I would not venture, for I know as yet comparatively little of them.

Of tobacco, I may say that I am opposed to its use in any form or for any purpose. I would be a "prohibitionist" as regards it, if it would have the desired effect. If you had seen as much of the habit of "snuff-dipping" as I have been unfortunate enough to witness, you would not be able to say that our girls do not use it nowadays. Among a certain class of people South (generally mill and factory operatives), it is a common practice for the women to dip snuff; and many, many girls, even the little ones four and five years old, are brought up in the filthy, detestable habit. This, however, is a habit by no means confined to factory operatives; for many country girls become addicted to the use of the vile stuff; and seemingly it is as hard for them to give it up as it is for men to part from their dear tobacco-quids. In central Alabama I was astonished to find among a *nicer* class of ladies that the habit was practiced, though in justice to them I must say it was strenuously concealed whenever practicable, from all outsiders who would not "dip." You must know that the Southern factory operatives are as yet a different class of people from the New-Englanders of the same occupation. I have heard my grandmother (who is a Vermonter) say there is a vast difference. In course of time I trust the class down here known as "factory folks" will be on a par with the renowned "Lowell girls" of Massachusetts. As yet they constitute an illiterate, oily, "unwashed" class.

ANTS.

I hope you do not imagine that all over the South the bee-keeper has to fight against the ant. If you should be under that impression, let me disabuse your mind of it at once. There are many places never troubled with the industrious little nuisance, while some others are infested. For instance, we seldom see any here; yet about sixteen miles distant on our plantation one can scarcely look on the ground without seeing some running one way or another, and it is pitiful to see the little chickens following the mother hen and keeping up a constant dance, in order, if possible, to escape the bites of these little dark-red ants.

I'll tell of an experiment of mine. I read once of the different kinds of stings that ants have—that is, some large red ones have a barbed sting like the point of a fish-hook, so that he is obliged to leave it in a substance too tough for him, as a bee does; but the common little ant merely bites. I thought it would be interesting to test the truth of the matter; so one afternoon I took a walk alone, to a red-ant hill whose location I well knew, and, seating myself beside it, I watched them awhile and then I carefully caught one and allowed him to run up my arm. Soon finding a spot to suit his purpose he inserted his sting a little below the elbow; and when he freed himself his sting remained, with a portion of the vitals, while the ant ran wildly about, then disappeared in the crowd, soon to perish, I suppose. I was satisfied fully of the truth of what I had read; but I was not content to let the ants alone. I caught and tried another with the same result; then more, until when I had finished I was the contented possessor of five stings on my arm. By this time my arm was itching, and was considerably inflamed. I walked home. When, by reason of the pain and itching, I could conceal my uneasiness no longer, I explained at the house what I had done, and was laughed at for trying such an experiment on myself. I went to my room, and was still suffering all the agonies the large red ant is capable of inflicting on a system rather susceptible to the effects of such poisons, and was in tears by now. I heard a voice calling me. "Bert! O Bert!" it called gently. My heart swelled; it was one of my brothers, and I thought, "Now I shall have some sympathy." I answered his call. This is what he said to me: "I say, Bert, had you not better send the result of your experiment to the New-York Entomological Society?" I "collapsed." I have never tried to investigate the different species of ant-stings since. BERTIE NORRELL.

Augusta, Ga., June 21, 1885.

Friend Bertie, I am afraid you are a little severe on your neighbors who work in the factory. There are factories here in Ohio where drinking, swearing, and tobacco-using are the rule; and then, again, there are others where such things are not known at all. I believe that the boys and girls who work in our factory are considered quite as respectable and intelligent as any class of people we have; and I am inclined to think that it is becoming more and more customary with the proprietors of shops and factories to insist not only on temperance in the matter of drinking, but in the choice of language, etc. Of course, in many kinds of work it is not possible for the operatives to avoid dirt and grease; but this fact should never be considered a reason to look down

on them.—We are glad to hear of your experiment in regard to the ants, and the way in which they sting.

SUNDAY SWARMING.

GETTING A SWARM FROM A HIGH TREE.

ONE Sunday a large swarm of bees came out and settled very low upon a peach-tree limb. It stayed about two hours, and then started off toward the east. If it had been a week day we could have hived it. Before this, all swarms that came out on Sunday stayed till Monday; but this one did not, so we went to work next Monday morning with sad hearts. Pa went to work in the orchard, and sent my brothers and me to hoe in the garden, and told us when we got done to go where he was. Just as we got done in the garden at 11 o'clock, we heard a loud hum which sounded like bees passing over. Brother Finney ran out at the back of the watermelon patch, and found a large swarm of bees in the top of a high white-oak tree. Pa said it was almost too late for them to leave, and told us to work till twelve o'clock and then we could hive them. I was looking all the time for them to fly away, and I tell you I did not eat a very hearty dinner that day.

I was soon seen climbing up the tree, with some rope in my hand. The rope was made fast to the limb, then to the tree. Mother was at the foot of the tree, while my brothers cut. Pa was not in sight. When the limb was sawed off, the rope broke and the limb fell down, and there was a little scattering out at the root of the tree, especially among the younger boys. These words were often repeated: "Are they stinging you much?" No answer. After a while, "Are they stinging you much? Why don't you answer?"

At last it came. "I was shutting my mouth to keep the bees out. They are flying all over me, and stinging me on the head."

One of the boys was soon seen running toward the house, with one eye larger than the other. Finney kindly gave me the swarm. They settled on a smaller limb. I got another rope, then tied it to the limb and sawed it off and let it down and hived them, and they lived and did well.

After a while I sent \$3.00 for half a pound of bees and a queen; but when they arrived they were all dead but the queen and a few bees. I put them in a hive with a frame of brood, and next morning I went to see how they were getting along, but they were gone. On looking around I saw a few bees crawling in the grass, so I looked for the queen, but in vain. So I went to the house, feeling very sad—money gone and bees gone, and no money to send for any more. I guess you know how I felt.

About 11 A. M., mother said that the bees kept flying around the house and told me to look after them. When I looked, where do you think I found them? On the top of the house, under a board! We hived them and moved an old colony, and set the new one in its place, which made it a strong colony; so now I have three colonies of Italian bees, and all doing well.

Columbus, Miss.

B. J. TAPLEY.

Thank you, my friend, for your graphic and interesting letter; but it seems to me there would be no harm in hiving bees that settled upon a peach-tree limb, even if it

were Sunday. Of course, I should not want to go up into a tall tree with ropes, etc., on the Sabbath. The point you make, in regard to being sure that you have a rope that will not break, is a good one. I have heard of just such mishaps before. The foliage on a large limb is pretty heavy, and you want a good stout rope. If your half-pound of bees arrived mostly dead, the man who sent them to you certainly ought to credit you with their value; at least, that is the way we do business. You very properly went to work as well as you could to save the queen, so the shipper ought to feel grateful to you for saving him so much, even if the bees did die.

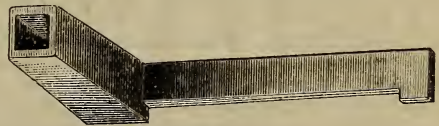
A SIMPLE DEVICE FOR EXCLUDING DRONES.

A DRONE-EXCLUDER MADE OF A SINGLE PIECE OF WOOD.

MAIL to you what I call a drone-excluding device. I think it ahead of Alley's in every way; handy to make, cheap, nothing to rust. Place it at the front of hive, tuck it so the drones can not move it, then see them come out of the tube. When they come back they alight on the hive, or at the entrance of hive. They will never find the place where they got out. Try it and see; if it is of any use to you or any other man, let him have it. You see, I trapped wild turkeys. This is the same, only the drones come out to be killed, while the turkeys went in. Bees are doing finely.

B. F. SPAFFORD.

Morning Sun, Iowa, July 27, 1885.



SPAFFORD'S DRONE-EXCLUDER.

The friends will notice that this device is made entirely of wood. The square tube is $1\frac{1}{2} \times \frac{3}{4}$ inch at the large end, and $\frac{3}{4}$ inch square at the small end. The hole is about $\frac{1}{2}$ inch square; but I presume a round hole, cut square and funnel shape at each end, would answer equally well. The arm projects 5 inches. A notch is cut in one side of this arm deep enough to let the worker-bees through, but exclude the drones. The device has to be placed over the entrance of the hive, and fastened so it can not be moved away. The worker-bees in going out can go through the tube or under the bar, as they choose. The drones, finding themselves unable to get under the bar, will gradually work along until they go out of the tube, and I can readily believe they will never think of going back the way they got out. These devices should be made at a price not to exceed 10 cents each. If wanted by mail the postage will be 5 cents extra. I should be glad to have friend S. tell us how long he has used this arrangement, and how it answers under all circumstances. I suppose we should have to have metal for the bee-space, if we expect to restrain the queen as well as the drones; but wood will answer perfectly well for drones only.



Every boy or girl, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from \$1.00 to \$1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock six different books, as follows; viz.: Sheer Off, The Giant-Killer, The Roby Family, Rescued from Egypt, and Ten Nights in a Bar-Room. We have also Our Homes, Part I, and Part II. Besides the above books, you may have a photograph of our old house apiary, taken a great many years ago. In it is a picture of myself, Blue Eyes, and Caddy, and a glimpse of Ernest. We have also some pretty little colored pictures of birds, fruits, flowers, etc., suitable for framing. You can have your choice of any one of the above pictures or books for every letter that gives us some valuable piece of information.

"A chiel's amang ye takin' notes;
An' faith, he'll prent it."

WELL, little friends, it is now August, the month that usually furnishes us the dry hot weather. But it is not dry here at all; in fact, it rains almost every day, and the under-drains carry so much water into the carp-pond that it is full, and running out at the outlet almost all the while. When the water rises so high that the carp can get up and nose around the grass on the bank, they enjoy it amazingly — especially when the water is very warm. The other morning I went down to the pond very early; and so many great big fish were busy at the roots of the grass along the bank that I thought perhaps I could catch one and carry it up to the house to surprise Huber and the rest of the family. I got down on my knees among the tall grass and weeds, and waited until a great big one came up right before me. The water was so muddy he could not see me at all, and I waited until his great shining back was right up between my two hands. I thought I would make real sure, and so I moved my hands down until they almost touched him, and then made a grab. Do you think I got him? Not a bit of it. I guess we both felt somewhat astonished. The minute one finger touched his back he made the biggest flop you ever heard of, and threw the water all over me, and was gone somewhere so quick that I couldn't tell how or where. Just then I heard a chuckle upon the fence; and, looking up, I saw a squirrel acting just as if he were holding his sides to keep from laughing. When I turned he started off along the top of the fence; but he made a sound, as if he were chuckling still. I washed the muddy water out of my eyes, and went home just in time for breakfast, where I told my adventure; but I didn't have any great big fish to show them, as I had planned.

KIND WORDS FROM ONE OF OUR JUVENILES.

My papa keeps bees and thinks a great deal of his A B C book he got of you, and doesn't know how he got along without it, and also takes GLEANINGS. Mamma thinks a great deal of Our Homes in it. He has twelve stands of bees. Papa bought that nice queen you sent to Mr. Essick (as he found after sending to you that his bees had foul brood). Papa likes to deal with you, as you are so prompt.

Grand Ridge, Ill.

LIZZIE A. PARMLEE.

My papa had 20 swarms of bees last fall; five of them died in the winter. One of them lost their queen this spring. Papa gave them a comb with larvae in, but they would not build queen-cells. He looked two or three times, but could not find the old queen, so he put a weak swarm in with them, and now they are all right. Nearly all the bees died around here the past winter.

MARY WILLSON, age 9.

Newmarket, Ont., Can., June 4, 1885.

A FAVORABLE REPORT OF THE FOUNTAIN PUMP AS A SWARM-ARRESTER.

We had a swarm of bees the other day, and they stayed on the tree about three hours, and then they started to go away. Mamma went and got the fountain pump, and threw the water up in front of them, and they thought it was raining, and they turned and came back and went on another tree to see if it was really raining. Then we got them and put them in a hive.

ALICE MCBAIN.

Cokeville, Pa., June 5, 1885.

CROSS BEES, AND FLORA'S PROPOSED REMEDY.

Grandpapa says Mrs. Harrison need not kill her cross bees. Just make a false man and set it up before the cross bees, and let them have their fill stinging that. We have only one stand of hybrid bees, and they are as cross as the letter X. They will go four or five rods to sting a person.

Daisy, Kansas.

FLORA A. COMSTOCK.

Although I have never tried your plan, Flora, it does not seem to me as if I should want to do any thing that would make bees sting worse. My experience has been, that it is best to teach them to forget their stings as much as possible. By the way, I think I would apply the same treatment to little girls and boys. Have them taught in such a way that they will forget that they have the power to sting or hurt the feelings of anybody.

HOW TO TEACH FISH TO RING A BELL WHEN THEY ARE HUNGRY, ETC.

Pa has 14 stands of bees. He divides them in stead of letting them swarm. Pa is very much interested in carp culture. I read in a little paper pa has, that fish in Japan are taught to ring a bell when they get hungry. The way they learn to do it is to hang a silk cord in the water, with a little piece of bait on it. The fish then see that it is something to eat. They catch hold of it, and give it a jerk, which rings the bell. Pebbles are afterward tied to the cord. They will then catch hold of the pebbles when they get hungry, and thus ring the bell.

AMY J. HOLLEMAN.

Wager, Ark., June 1, 1885.

RASPBERRY-BLOSSOMS, CHICKENS, ETC.

The bees are working busily on the raspberry-blossoms and clover, especially the alsike. We have had ripe strawberries for two weeks. I hope

Huber has had some by this time. You seem to have had bad luck with your chickens. But if you had washed the eggs clean in luke-warm water they would have been as likely to hatch as at first. Of 90 little chickens hatched, we have lost but ten. Well, I will close by telling you that to put a swing up in or near the bee-yard is the way to get the children to watch the bees in swarming time. Papa always puts one up for us, and we like it pretty well.

ETHEL I. BEATTY, age 14.

Shaw's Landing, Pa., June 23, 1885.

HARD CIDER "HARD" ON BEES.

My brother-in-law lives about fifty yards from where we do. He had a barrel of vinegar sitting out in the yard making, with a cloth tied over it. His bees cut a hole in it, and they got drunk. They were stumbling about, and stinging and falling all over the place. This is the truth. Did you ever hear of bees getting drunk before? He covered it up, and the next day they were all right.

Collinsburg, La.

JOHNNIE DUDNEY.

Yes, friend Johnnie, I have heard of bees getting drunk before, but I have always been a little incredulous. Are you sure they did not get their wings daubed so they could not fly, that made them tumble about in the dirt? Bees are apt to do this when fed in the open air with any kind of a feeder, unless the honey or syrup is made very thin by adding water to it.

ABOUT THAT BEE-TREE.

My pa and uncle robbed four bee-trees this spring and we had some very fine honey and sold the bees-wax for 12½ cents a pound. We tried to save some bees from the trees, but could not; they would not go in the hives. My pa found a little oak this spring that had a swarm of bees lodged on it. He took his ax and cut the tree down and tried to save the bees but failed. He left the hive there all night, and in the morning the bees were all gone, so he brought the hive home. We have a great many wild flowers here, and some wild honey in the woods. I am anxious to learn about bee-raising, and if I can get the money I will take GLEANINGS, and try to raise bees. I love flowers and so do they. I have my window garden of flowers, and we are independent girls; we saw and nail our own flower-boxes, and put up the shelves, and I think we can make a hive.

SARAH L. MARTIN.

Bayou Chicot, La.

HOW WE HIVED A SWARM OF BEES.

One day last spring my father had gone away, and while he was away the bees swarmed. Well, I ran to the field after my cousin, who is about 20 years of age. He was working for my father. We did not think he would be of much help, because he was such a coward around bees. Well, they had alighted on a big limb—so big that we could not cut it off, because it would spoil the tree, so we spread a table-cloth on a stand, and then placed the hive on it under the bees. We dared not go up so close as to shake the limb, so my cousin took a long rope and went up to the limb very carefully, and tied the rope to it; then all of us—my sisters and brother, cousin, and myself—got hold of the rope about a rod from the limb, and then we would all jerk at the same time. Well, we managed to get a few of them off, but not enough to amount to anything. My cousin got stung three or four times, and then he had his overcoat and mittens on, and a veil over

his face. I guess he must have sweat some, for it was a very warm day. Well, my sister Nettie plucked up courage and went up and shook them all off, and never got stung, and then we got them in the hive all right, and did not have any more trouble.

IVA A. PECK, age 12.

Jackson, Mich., June 3, 1885.

REPORT FROM A JUVENILE.

Our bees were gathering honey lively until bass-wood ended. The honey which the bees gathered so far is of the finest quality that we ever see or tasted—so white and sweet.

Ligonier, Ind.

A SUBSCRIBER'S SON.

NETTIE AND HER EDUCATED HEN.

I have an old hen, and her name is Mabel. She has 18 little chickens. I take her and set her on a box, and tell her to sing me a song, and she will begin and sing a few moments; and if she does not sing long enough I tell her to sing some more, and then she will sing until I tell her to stop. I keep Mabel and her chickens in a coop. One morning all of her chickens got out of the coop and went off in the pasture, and I went and got her and asked her if she knew where her chickens were, and she answered me in some language, I do not know what kind; so I took her out where her chickens were, and I asked her if she was glad I took her to her chicks, and she answered me. My old hen is a pure buff Cochins. There is a lady who engaged our eggs one year ahead, so as to be sure to get the pure buff Cochins. She takes all the eggs we have to sell. We keep about 30 hens. My brother keeps bees; he has three colonies.

Woodstock, O.

NETTIE CRANSTON, age 10.

WINTERING OUTDOORS WITHOUT ANY HIVE; A REPORT FROM ONE OF OUR JUVENILES.

Mrs. Mary Anderson, near Antrim, Guernsey Co., O., had a swarm of bees July 4th, 1881. They hived them in a new box. In an hour they came out and went back; but instead of going in they went under the bench and built combs extending from the bench to the ground, a distance of 12 inches, and 20 inches in width. They had no protection except a picket fence, and a few loose boards that stood on the west side to prevent the snow from blowing in on them. In this condition they wintered successfully while several other stands on the bench died. One of their neighbors, a Mr. Griffith, transferred them in the spring, and pronounced them good. They were the black, or brown bees. The lady who owned the bees lives about four miles from our house; and as it was something new to me about bees, I thought I would write it to you.

ANNA B. MCGREW, age 10.

Milnersville, O., July 8, 1885.

Friend Anna, there are a good many cases on record quite similar to yours; and I believe that a great many times our bees would winter all right if put under a bench, without any hive at all, where they now die by the hundreds and thousands. These cases point clearly to the fact that our bees are too closely packed up; that is, they do not have air enough; and such facts have come to light year after year for almost centuries. It is doubtless true, that they will do better with some protection than with no protection at all; but the protection ought to be in such shape that it permits air to pass freely, around and through the cluster of bees. A

chaff hive with the entrance open the full width in winter, as it is in summer, and loose leaves or loose chaff above the cluster, seems to me would be about the thing.

Pa has five swarms of bees, and one of them is an Italian swarm. He has log hives five feet long and 32 inches in diameter. They are hollow, and there are little doors in each end, and he takes the honey out of the little doors. I like honey. MILLY KEYSER.

Wilksport, Ont., Can.

I am twelve years old, but I must write about bees. Bees were introduced into America from Europe; they were first brought to South America in 1845, and California in 1850. The Indians called bees the white man's fly, because it followed where he went.

EUGENE HOLZER.

Allerton, Iowa.

HEDDON PLAN OF AFTER-SWARMING.

Ma has 40 stands of bees. She lost eight stands last winter. She did not lose as many as the most of the people. It was very cold here. My ma takes GLEANINGS. She had only 21 stands in the spring, and now she has 40. Ma tried the Heddon plan, and did not have any after-swarms at all. I read GLEANINGS when there are letters in it. ANNIE COCHRAN.

Macon, Ill.

WHAT AILED THE BEES?

Papa bought several stands of bees, and the most of them died last summer. Could you tell what was the reason?

ETTIE FARIS.

Huffman, Ala.

Friend Ettie, it is pretty hard to tell why the bees died in the summer time, without knowing more about the facts in the case. Perhaps they lost their queen, and dwindled away. I think the A B C book would help you to find out what the trouble was.

THE CALVES, THE DOG, AND THE SHEEP, AND THE WAY THEY MANAGED TO FIND NAMES FOR THEM AT JESSIE'S HOUSE.

My father takes GLEANINGS. We have an extractor that we bought of you several years ago. Brother has three calves, named Cleveland, Hendricks, and Tilden. Sammie has a little dog named Huber, and two sheep named Doolittle and Novice. I am one of six children, Baker, Fannie, Jessie, Ellie, Thomas, and Susie.

JESSIE SMYLYE.

Caseyville, Miss.

HOW TO HIVE A SWARM OF BEES, DESCRIBED BY ONE OF OUR JUVENILES.

My aunt Fanny keeps bees, and one day they swarmed, which is something I had never seen them do before. On my way to school I heard an awful noise, and I knew in a moment what it was. Then I ran into her house and shouted at the top of my voice, "Aunt Fanny, your bees have swarmed!" But I could not find her; so I ran over home and told mamma the whole story. She ran out to look at them, while I ran up the road to find my aunt Fanny. I saw a boy, and he said she was up at his house. After I ran up there and told her, she jumped and caught up her shawl and said, "What! have those bees swarmed again?"

"Yes," said I.

Then she told me to run down on the new road, and get my uncle William, who was cutting bean-poles, which I did. We got into the wagon and drove home as fast as we could. Then we fixed

the hive all ready beside the other hives, and then my uncle William took a saw and sawed off the limb upon which the bees had gathered, and placed it in front of the hive. Then my aunt Fanny sat down beside them and took a little branch off a pine-tree, and tickled the bees on their backs, and made them go into the hive. I lay down in front of the hive, and laughed to see them stand on their heads as they went in.

HERBERT A. HODSDON.

Center Ossipee, N. H.

Friend Herbert, your description is real good; and I presume that, by the aid of it, one who had never hived a swarm would manage pretty fairly.

BEES THAT MAKE HONEY, BUT DON'T SWARM.

My brothers had a swarm of bees summer before last that swarmed six times, and went back to the hive every time. It died the next winter, and had a lot of honey left in the hives. What is the matter with a swarm that makes lots of honey and doesn't swarm? My brother has got a swarm of bees that have not swarmed for three years.

Douns, Ills.

Why, my little friend, I should say that nothing was the matter; but on the contrary, the bees are doing exactly what we want them to do. If you could advertise a race of bees that would make lots of honey, and would not swarm, you could make a mint of money.

450 SWARMS OF BEES IN SIX DIFFERENT APIARIES; REPORTED BY A 12-YEAR-OLD JUVENILE.

I have one swarm of bees, which was given to me by my pa. He has 450 swarms standing on six different places, which he works with the help of a hired boy. I have two brothers and two sisters, and we have to help pa in the summer, making foundation and extracting honey. Pa puts a lot of empty comb into empty bee-hives on the wagon, to carry them to the different places, and fetches back full ones; then we children have to put them in the extractor, and throw out the honey and put it in tin pails. I can not go to school just now, as we are very busy; but I am fond of books. My elder sister is 15 years of age, and is at work putting foundation in honey-boxes. My youngest brother is five years old. He is wasting a good lot of nails, and not much good yet.

ELIZABETH HOFFMAN.

Canajoharie, N. Y., June 28, 1885.

Why, Elizabeth, your father is really putting in practice the plan I give in the A B C book. I notice your letter is dated where the *Bee-Keepers' Exchange* used to be published. I am glad to know that bee culture is flourishing to such an extent in the neighborhood of our old friend Nellis.—Never mind the nails your five-year-old brother is wasting. Although his work may not amount to much, driving nails helps to make the boy grow into a man; and if he learns to drive nails skillfully, the time and money won't be wasted. It was only yesterday that I saw two of our grown-up men driving nails, and they started the nail into the board in such a way that it acted like a wedge, and would be almost sure to split the board unless it were very tough and strong wood. I wonder how many boys and girls who read this know just how to set a nail when they commence to drive it. If you do not, get your father or brother to show you.

OUR HOMES.

Give, and it shall be given unto you.—LUKE 6:38.

IN my talk to you to-day, my friends, I shall lay myself open to the charge of boasting of how good I am, as I have done many times before; but those who are acquainted with me understand what I mean, and will take me as I mean, but it might not sound so well to a stranger; therefore if any one reads this who has just subscribed for GLEANINGS, and does not know my way of teaching, he will please take notice.

Our friend Terry, in teaching us how to raise potatoes, feed horses and cattle, and other like farm operations, keeps telling continually what *he* did; and his statements are so much beyond what farmers usually do, that a great many are tempted to say they do not believe he is truthful. You can visit him, however, if you wish, and can inquire of his neighbors or hired help in regard to the statements he has made, and thereby satisfy yourself. Now, I have not any thing to tell, of how much money I have made, or of how much better I have done than other people; but I do like to tell how I have succeeded, assisted by the teachings of the Bible, in getting along very pleasantly with the world, and in having a very pleasant and joyous life myself.

The words of my text came to my mind this morning while we were discussing celery. We have for the first time succeeded in getting a good crop, some of it ready for market in July, and it is selling quite readily at five cents a stalk. A stalk of the White Plume, and another one of the Crimson Dwarf for contrast, were in a glass while we were talking. One of the family remarked, that the boys all over town were going into celery, and that they would soon run the business all out, for they were getting just as nice stalks as I did, if not nicer. Another member of the family made the remark, "That is just what he wants them to do—and, in fact, is just the way he has worked all his life." I presume that the speaker meant that I always delight in teaching people how to do things, especially young people; and that, when my pupils become more expert than their master, I am always happy. I have been thinking it over, dear friends, and I think it is true. I do not wish you to give me any great credit for it, for it seems an easy thing since I have become a Christian. You know I have no patents on any thing I have ever originated, nor do I want any. Visitors often express surprise, and say they should think that I would need some protection. My reply is, that I am glad to have people copy any thing I make; and if they have facilities for making it cheaper than I can, I ought to be pleased because the world at large will be benefited by lower prices. But some of my intimate friends declare that if I had my improvements patented, and would monopolize the sale of them, I could be worth thousands of dollars more than I am now.

Now, then, friends, remember the caution I gave you in the first paragraph of this talk,

when I say, "I do not want to be worth thousands of dollars more than I am now." I do not make this speech in the presence of strangers, or of those whom I think would not understand me, for it would be met with derision, and may be sarcasm. Some whose eyes fall upon these lines may say, "Mr. Root, if you do not want to be worth any more than you now are, why do you stick and hang for every penny, in the way you do, and persistently keep dunning those who owe you, with such fierceness?" My reply would be, that I try to collect all my just dues, because I believe it is better for the one who owes to pay it, rather than to be excused from paying it; and I have come to this conclusion after years of experience. Yes, I believe it is better for a poor widow to pay her just debts than to be excused from paying them. If widows or other people who have been unfortunate by reason of sickness or death, or other ways, need assistance they should have it, and I believe our townspeople are well aware that I am ready to subscribe liberally; but I think such subscriptions should be a separate matter from the debt. My experience has been, that there is something demoralizing in excusing a person, whether a woman or man, from paying what he justly owes. If a poor family were owing me five dollars, I should insist upon the payment, if there were a reasonable prospect that they could pay it; but if a subscription were started in order that they might have a house built, so as to avoid paying rent, I should enjoy subscribing *ten dollars* for the purpose, or even more, if the case seemed to demand it.

Now, then, in regard to the promise, "Give, and it shall be given unto you." People often urge, that, if we are not protected by a patent, the unscrupulous world will rush right in and steal every thing, may be leaving the inventor penniless. I have heard of such cases, friends, but they have never come under my own experience; that is, I have heard people declare they were the authors of great inventions, but that unscrupulous men of means had robbed them. I have never come across such a case that I know of. On the contrary, my experience has been, that, where a man has been willing to give freely all the knowledge or information he possessed, in some way or other new things were continually opening up to him. In the past two or three years a good many have started in the supply business, making and dealing in bee-hives and fixtures. I have been asked if I was not afraid that so many would go into it that it would be overdone, and our large factory would be standing idle. I have not had any such fear, but, on the contrary, I have enjoyed the work of furnishing these tools and implements for running opposition to us. I have delighted in having the friends visit our factory, and witness the manner in which we make hives, comb foundation, sections, etc. I have been glad in seeing them take measurements, that they might build machinery like our own. One reason why I was glad to see them do it was because it saved heavy freight shipments on such heavy goods as hives and sections. We are now

getting five cents a stalk for our celery, as I have told you. Some extra fine stalks have brought as high as ten cents each. With the prospect that all the boys will go into it another season, the prices will go away down. Never mind; then many people will be able to afford this luxury, who can not enjoy it now. New things have opened up to me all my life, and I have no fear but that they will be opening up still.

A few months ago there was a talk among bee-keepers that Cuba was going to furnish nice honey so cheaply that, if it were permitted to come to the United States free of duty, nice honey would come down to six or seven cents a pound, and our bee-keepers would be compelled to give up the business, and would become bankrupt. Now, I did not look at it that way at all. When it was announced that Cuba could furnish such amounts of honey by means of modern appliances, I felt a thrill of pleasure in thinking that honey would then be able to compete successfully with sugar, and that many poor people could enjoy it every day who could not afford it at present. And while I am about it, I do not believe in duties between countries. I do not know any thing about the political aspects of the matter, but I would have nations as neighborly as individuals, and it seems to me to be a grave mistake when we put up a barrier, in the way of duties and customs. When Jesus spoke the words at the head of our chapter, he had been talking quite a little time to his followers about the evils of jealousy, covetousness, and selfishness. He said, "Love your enemies, and do good to them that hate you." Now, it seems to me that in this matter of duties we are afraid to do good to those who are *friends*, to say nothing of enemies. "If ye do good to them who do good to you, what thank have ye?" And again, "If ye lend to them of whom ye hope to receive, what thank have ye?" What an unpleasant thing it is to be always worrying, for fear somebody will get ahead of us, or for fear somebody will get the better end of the bargain! Only yesterday, I, with a neighbor, bought a carload of water-melons. Some suggested the proper way was to have two divide them—one pick the best melon, then the other pick the best melon, and so on until the carload was exhausted. We managed in that way, but I objected on account of the time it took. The time occupied was in making careful selection, so that the man who was working for me might not let his opponent get the better end of the bargain. I proposed that each should take a melon, as near alike as they could get them, by picking them up about as fast as they could handle them. Very likely the division might not be as exact, if we did it this way. Well, suppose it were not. My neighbor would have a little better half than I did, or I should have a little better half than he did; and providing it were impossible to divide them exactly, I should prefer that he have the better half, and I have do doubt he would prefer that I should have the better half. Then why so much anxiety and so much pains?

Since Nancy has died, I am under the nec-

essity of buying another horse. My first impression that was at all pleasant, in regard to her death, was, that I could probably purchase a horse of somebody who needed the money badly, and thus do him a favor. I like to pay people money; don't you?—especially when I have an opportunity of noticing the good use that is made of it. A few days ago one of our men wanted me to come and see his garden. He was not at home when I chanced to have a spare moment, but I went all over his little place. I looked at all his vegetables, and admired his pretty lawn. I took in at a glance the work his good wife had done also, in making the home pleasant, and the thought that the money that I had paid him for years every Saturday night had been used in this way, gave me a thrill of pleasure. I know he loves his home, and I know he thanks God for it.

Now, in regard to purchasing a horse, somebody suggested that farmers would ask more for their horses if they found I wanted one, because they know I pay liberally. Well, suppose I do give some young hard-working farmer a good price for the horse he has taken great pains to rear and train, what harm will it do? You may say, "Why, friend Root, you will run through all the property you have, if you pay big prices for every thing, just because you like to see people pleased with a big price." To which I reply, I shall not do any thing of the sort. People have prophesied that nobody could ever stand the ways in which I "throw away my money" ever since I became a Christian. But I have not become poor, nor got into debt. It is true, I am paying interest on four or five thousand borrowed money, and I have been paying interest almost all my life. A good deal of the interest goes to my employees, who have left their hard earnings with me, and I enjoy the fun of paying the interest. The book-keeper has positive orders to pay it annually, whether they call for it or not; and if they do not want it, the interest is allowed to compound. Sometimes she argues that there is no need of giving people compound interest, when they would be perfectly satisfied with simple interest. Now, I think that compound interest is all right. When I keep anybody's money, providing I need it, I want to pay them for the use of it, just as much as I would pay a man for the use of a horse when I use the horse every day. Some widows of our town have left their money with me. They get no interest at the bank, and it affords me a real pleasure to make investments so I can afford to take their money and pay them interest for it. Do you say again, that I shall break up if I keep going on in that way? People who do not know me have said so ever since I became a Christian, but they have been mistaken. What does the little text say, at the head of our chapter? I have not quoted it many times, but I have had it in mind all through my talk.

I like to buy queens of the friends in the South; I like to send them orders for "great big lots" of them. And then I like to see postal cards where the book-keeper tells them, "The above amount is subject to your

order whenever you choose to call for it." Then I like, too, to see the friends call for it, and I love to show them how quickly we can speed a check on New York, in answer to these requests. I tell you, friends, it is rare fun to do business—yes, lots of business, when you have the money ready to meet every payment or every demand just as soon as the call comes. No doubt you agree with me; but perhaps you ask, "But, where shall we get this inexhaustible bank account, or balance on the bank, subject to order?" Why, bless your heart, dear brother or sister, read the text, and now read this promise:

But seek ye first the kingdom of God, and his righteousness; and all these things shall be added unto you.—MATT. 6:33.

If all your business arrangements are managed with the sole thought in your mind of doing good to your fellow-men, or, in other words, working for the Savior's glory, God will send the means and whatever else you need. Do you ask if I have ever been cramped for money? Yes, many and many a time, and many and many a time have I prayed, as many of the older friends know, for the means to do that which seemed right, and I believe that God always sent it whenever he could do so, and not have it harm me. A great many of my plans and experiments have been made just to discover something whereby I could keep the friends at work who were faithful, and wanted work; and whenever the motive has been purely to help my fellow-men, and not to get riches and honor for myself, God has sent the means. A good many times I am off the track. Sometimes for days together it seems as if I had strayed away from my Savior, and as if selfish feelings and ends would get uppermost. Then, of course, God could not consistently send me means. The first commandment reads, "Thou shalt not have other gods before me." When I keep in line with that, I am happy and thriving and prosperous. When something else gets before God, and I become selfish, I get to dwelling on narrow and contracted ideas—envy, jealousy, etc. (for I tell you, I know all about these things), then God withholds his promises, and I thank him for so doing.

I am vehement in collecting what is due me, whether I have money in the bank or not; although it is true, that sometimes, when we are in urgent need of money, I mention the fact to the friends who are owing me. I can illustrate the point I wish to make, by a little incident of the morning. Huber was playing near a large basket of beautiful red Astrakhan apples. His mother did not wish him to eat them, for very good reasons; and when I saw him chewing something, I looked; but the apples in the basket were all sound and whole, and he had none in his hand. Again and again I saw him eating, but it was apparently something else besides the apples. Pretty soon I looked over my shoulder, and saw him taking a great bite slyly, after which he crowded the apple away down under the others. For the first time in his life he was caught in the act of deceiving his papa. I fished the apple out of its hiding-place. In his guilty haste he had got hold of one that was rotten,

and had got his mouth full, and some on his nose; but, worst of all, *Satan* was making an entrance to his little heart, and, baby as he is, he showed his guilt in his downcast eyes. His papa gave him a little sermon, adapted to his limited vocabulary and intelligence. Did I take all this pains, and stop my work, and "make such a harangue," as some might have called it, just because of the value of a miserable little snarled specimen of an apple, and half rotten at that? Why, bless you, no. I did not care how many apples he ate, and I would have given him a basket full, or a wagon-load, in an instant, had I been sure they would have contributed to his best good and highest happiness. They were withheld because they were not good for him; and yet one who did not know me, nor understand the circumstances, might have called me little, stingy, and selfish. An hour later a poor specimen of humanity called at the back door, and wanted to know if I would give a poor man a bite of breakfast. I told him that the laws of the State of Ohio made it a crime for him to go around from house to house, making such a request. He at once replied that I was a pretty specimen of a Christian if I could not give a simple breakfast, with such an establishment as I seemed to be master of. I told him that he seemed to be able bodied, and capable of working, and that I would find him work at once, if he would do it, and find him a breakfast too. He glanced up, and then declared that he was not going to work unless he could have some kind of *decent* wages. He preferred to beg, if he could not make his own terms in regard to his services. Do you not see, friends, that the promise at the head of this chapter refers to none of these things?

In all your intercourse with your fellow-men, give good measure. This noon, one of the girls was going to send away some soiled bee-feeders. Christian people ought to give good measure and clean measure. I thought so then and think so still. Give a good clear equivalent for all you receive. Be careful and faithful, and make it your effort to please those whom you serve, and God will, in his turn, give to you good measure, pressed down, and shaken together; for I assure you that the great Father above is not short-handed when he makes good his promises. Try him and see.

I believe I have mentioned before, my experience with a brother-jeweler, while in the jewelry business, at the time of my conversion. We had been having a newspaper controversy, and I had occupied column after column in our county paper, telling the people how good and how smart I was, and how bad and how unfortunate my brother-jeweler was. We paid for these newspaper notices at so much a line, both of us, and threw away our money that way, besides throwing it away in selling things at a less price than they could be afforded. Does a Christian ever get into such jangles? If he does, it seems to me his Christianity is rather weak. Well, after my conversion, customers who wanted to buy articles of some value would go first to one store and then the other. One rainy day, when trade was

dull, somebody wanted a piece of plated ware, worth ten or fifteen dollars; and in order to get me to lower my price, the customer mentioned the fact that Mr. W. had a beautiful one that he had offered so and so. What should I do? What *ought* a Christian to do? I prayed God to show me, and the still small voice said, "Do good to those that hate you." Mr. W. doubtless hated me, because I had tried to injure him, and had tried to get away his custom, and break down his trade in every way I could. I will tell you what I did. I told the friend who wanted the article that it was not unlikely that Mr. W. had got something nicer than I had, and perhaps he had succeeded in getting it cheaper than I had bought my goods, and that I was quite willing she should trade with him, for he was a young man just starting in business, and that I should be glad to see him get along well. The lady looked up in astonishment. I assured her, by a pleasant look, that I really meant it, and by my advice she bought her goods of my neighbor. Do you think I felt bad because I had lost quite a sale? Not at all. God sent into my heart a flood of peace and happiness that was worth more than all the money I ever received in all my life for *any* goods, and I kept it up day after day, until my neighbor finally concluded that true religion was something worth having. And God crowned it all by enabling me to lead this man to the feet of the Savior; and one evening, after we had had a long talk, I had the pleasure of calling upon our pastor to kneel in prayer with the two jewelers of the town, who had, only one year before, been such bitter enemies that it was the talk of the county. Did my business suffer meanwhile? Why, bless you, no. No man's business *ever* suffered because he took a *friendly* interest in the business of his rival, and delighted in turning trade into his hands. I have not kept up that spirit all through my religious life, dear friends; but if I had, I should be a happier man than I am now, and very likely I should have been a richer man in dollars and cents.

Since newspaper controversies are up, I want to say a word here. A great many bee-journals have been started, and those who have started them have no doubt been very anxious to have them a paying investment. Now, it is the most natural thing in the world for an old-established journal to feel that no more journals are needed in the same line of work; and we should have to be almost more than human if we did not at times give way, at least just a little, to a feeling of jealousy. I have had to pray over this a good deal; but I think I am clear over selfish feelings there now, and I am sure I rejoice to see other journals improve, and originate new features that I never thought of. I am not afraid now that I shall not be able to smile and look happy when somebody tells me that he takes some other bee-journal than my own; and it does not hurt me any — at least I think it does not — to have some one make the remark in my presence, that some other bee-journal contains all that is worth reading. Of course, I do not quite agree with him; but then,

you know we have different opinions and "notions," and I don't believe that I want to see any editor of a bee-journal hurt himself by some unwise course. Why, to be sure, I do not. I feel ashamed of myself when I think of the feelings that I have sometimes entertained. If the other journals speak slightly or sneeringly of GLEANINGS, and some of the queer ways in which it is managed, I try not to feel hard toward them for their unkindness, and I almost always succeed. Suppose you read that sixth chapter of Luke, from the 27th verse to the end of the chapter. What a happy world this would be, if all tried to follow that chapter!

A great many who read these pages may be poor in this world's goods, and feel like saying that, if they had a store and plenty of money, such a course would be easy. But, how about those who work hard every day, and can just make both ends meet? How shall they give, when they have not any thing to give? You are mistaken, my friend. You *have* something to give. Everybody has something to give, and does give it. Sometimes they give it grudgingly, I know; but it is given, for all that. If you are working by the day, you give your employer your strength and your good will — at least, you *ought* to give your good will; but I am afraid that some who work for wages do not. If so, they are the sufferers. If your employer is hard and exacting and unreasonable, soften him and Christianize him in the way I did my brother-jeweler.

There seems to be one thing that the laboring-classes, many of them, do not understand. It is this: There is, the world over, a continual demand, and an unsatisfied demand, for faithful service—for cheerful good will. It is not strength we want. Strength of muscle is cheap; there is plenty of it. Strength of muscle we find among the men who shovel gravel on the railroads; but too often we find it without the good will accompanying. I once knew a widow woman with quite a family of children, who would not listen to the advice of her friends, to put her children out. She wanted to keep them all together, and she wanted to provide for them without outside assistance. Her strength was not great, and she tasked it to the uttermost, and then felt she was not equal to the task. What should she do? In a little time the neighborhood discovered that she was faithful to any thing intrusted to her care — more faithful than the ordinary help that could be employed. In whatever she did, whether it paid or not, she was in the habit of insisting on strict fairness and honesty; she could not be induced to be a party to any little petty fraud; and most people who employ hired help for housework know that little petty frauds are common. In other words, she did her work as if she felt that the all-seeing Eye was on her, and it was him she feared, and not man.

One has to be faithful quite a little time, sometimes, before God's promise comes, and it was so in her case. But it did not take long before she became known and appreciated, and she had plenty to do, and at prices

that would enable her to keep her little family all together, educate them, and bring them up in the fear of the Lord. This is what Jesus meant when he said, "Give, and it shall be given to you." You know he told us that, after our duty to God, is our duty to our fellow-men; and it has seemed to me all my life that a great blessing was following every man or woman who delighted in seeing others prosper, and who find no greater pleasure than in studying and devising ways and means by which they might confer favors on their fellow-men.

Now, dear friends, I have talked to you today in regard to the importance of loving your neighbors; for love must be the inspiring motive, or it can not be done. You must have such a love for the friends round about you that what you give will be given through love, or as the outcome of love, and love will often prompt withholding. I refused to let Huber have even one red Astrakhan apple out of a great basket full, because I loved him, and I did not want to see him sick. If you love your neighbor, that love will prompt you just exactly what to do about giving. If you hate him, and are all the while saying sneering things about him, and encourage the family to talk over his weaknesses and inconsistencies, you are away off from the track; and while you are in that attitude and frame of mind, your giving amounts to nothing. You can not put on this Christian spirit. There is only one way, and that way is the straight and narrow path. It begins at the feet of the Savior. You must get clear down low at his feet before this can come natural or easy to you. He told his disciples one day when they were talking the matter over, that anybody who came in any other way was a thief and a robber. See the tenth chapter of John. Now, then, when you are tempted to be selfish, remember God's words, "Give, and it shall be given unto you." And remember, too, that your old friend told you how to manage so you could do it, and be happy over it, no matter where or who you are.

TOBACCO COLUMN.

FROM ONE WHO HAS USED TOBACCO FOR 15 YEARS.

I HAVE been using tobacco for 15 years, but have resolved to not use it again. I have not used any for eight months; and if you think me worthy of a smoker, send it by mail; and if I ever touch it again I will pay you for it, and pay postage too. J. M. RITTER.
Clapper, Mo.

I have 5 stands of bees, and I need a smoker very much. I smoke a cigar once in a while, but I would quit for a smoker, and promise to pay you for it if I ever smoke again. You say you want a person to say he will never use tobacco any more. I will say that, and stick to it; if I don't, I will register your pay for it. P. P. CYRUS.

Staley, Ky.

DYSPEPSIA AND TOBACCO.

I like to deal with men who try to abandon the use of tobacco, and therefore I will inclose you one

dollar for GLEANINGS. I have used tobacco for the last five years, and it will be 100 years before I use it again. I see that you will send any man a smoker, who will try to quit the use of tobacco. Please send me one, and I shall be very much obliged for it; and if I use the poisonous stuff again I will pay you for the smoker. Now, my dear friends, all of you who read GLEANINGS, bear this in mind—that I was very sick from the above-named poisonous weed. I had had dyspepsia for nearly fourteen months when I quit the use of tobacco, but I got my perfect health again.

Alabaster, Mich. WILLIAM KOHN.

I have resolved to quit tobacco, and I think that your gift will help me to quit that ugly habit; and if I ever use tobacco any more, I will at once send you the money for it; but I don't think I shall ever take it up again. JAMES R. ELMORE.

Horn Lake, Miss.

I have been a reader of GLEANINGS for some time; and as I was a tobacco-user I was induced to quit by reading GLEANINGS. If you think I deserve a smoker, send it; and if ever I use tobacco again I will pay you double the price of the smoker.

Swander's Crossing, O. JOHN H. DEWEESE.

FRIEND HUBBARD MAKES A FINAL DECISION.

I have often thought I would quit the use of tobacco and now I have fully made up my mind to do so; and when I commence to use it again I will send you one dollar to pay for the smoker.

Oil City, Wis. E. HUBBARD.

A MUTUAL AGREEMENT OF TWO NEIGHBORS TO DISCONTINUE THE USE OF TOBACCO.

Myself and one of my neighbors quit using tobacco on Easter Sunday, and I notice in GLEANINGS you give a smoker to those who quit. Now, we want you to send on the smokers, and if we commence using the weed again we will pay for the smokers. F. P. RISH.

Henton, Ill., June 18, 1885.

I have been keeping bees about two years; and believing smoking to be an adjunct to bee-keeping, I contracted the habit; but I found it hurting me, and told my wife I was smoking my last paper, and then I was done. But she doubted it; but seeing your offer strengthened my resolution. Though I can't say for certain, yet I will try; and if I fail to keep my resolution you will get your pay, or smoker will be returned.

Pine Grove, Ohio.

Your generous favor (a bee-smoker) came to hand a week ago to-day. It is a "daisy" smoker, I assure you. I never knew what to expect of a smoker before, but I know one thing—that if there were no better one in existence than the old smoker I had, I would have to invent one. But, friend Root, how can you afford to give them away, to hire men to not injure themselves? or is it none of my business? You do not even exact the postage, which was 19 cents on mine, or 17 more than I sent you, as I sent a stamp, thinking my letter would probably necessitate a private reply. I acknowledge I am a thousand times obliged for your generous confidence, and not that I have any desire to break my pledge. I will send you your money if you will tell me how much to send, as I am not willing to take any thing for nothing, and I hope you will find but few bee-men any other way disposed.

Pine Grove, O.

S. DANIELS.

Thank you, friend D.; but I don't want any more money, unless you go back to tobacco again, then you can send me the 70 cts. If I can see the friends giving up tobacco and other bad habits, it will be pay enough, and God will take care of the post-age-stamps.

GLEANINGS IN BEE CULTURE.

Published Semi-Monthly.

A. I. ROOT,

EDITOR AND PUBLISHER.

MEDINA, O.

TERMS: \$1.00 PER YEAR, POSTPAID.

For Clubbing Rates, See First Page of Reading Matter.

MEDINA, AUG. 15, 1885.

For with the same measure that ye mete withal it shall be measured to you again.—LUKE 6:38.

SECOND-QUALITY SECTIONS.

We have in stock about 10,000, just as good as our best in every respect, except that the color is a little off. We will sell these at half price as long as they last.

SPAFFORD'S DRONE-TRAP.

SINCE our article on another page in regard to this little implement was written, our apiarist gives notice that it works like a "charm." The drones are all found outside in a cluster the next morning after it has been used. We can furnish them at the prices given under the illustration.

OUR LAWN-MOWER FOR BEE-KEEPERS.

So much of a trade has sprung up in these that we are enabled to reduce the price to an even \$6.00, instead of \$6.50. It is, perhaps, the best lawn-mower made, for cutting grass when it gets to be four or five inches high; and during a damp season, like the present one, such a machine is quite desirable.

INTRODUCING NEWLY HATCHED QUEENS, ETC.

ON page 562, friend Ellison gives a report in regard to introducing virgin queens. His success was just about what I should expect it to be with queens newly hatched. With those several days old he did better than I should expect. I believe the general experience has been, that newly hatched queens can be let loose into any hive that has been queenless for 24 hours or more, almost without a failure.

SENSE AND NONSENSE; SIFTING ONE FROM THE OTHER.

OUR good friends of the *Ohio Farmer* pleasantly take GLEANINGS to task for being devoted exclusively to bees and honey, and yet discussing whether arnica is good for sprains or not. If the editor of the *Ohio Farmer* read our whole article through he will notice that I had been speaking of the application of remedies in the shape of medicines for bee-stings. Well, I believe that nearly every old bee-keeper now agrees that the various stuffs that have been so emphatically declared a perfect remedy for stings have all been proved to amount to just nothing at all; and I "sort o'" asked the question, if it was not possible that our remedies for sprains and other like mishaps had as much to do with relieving the suffering, and no more. May be arnica

is good; but, would not water as hot as the patient can bear it be equally good, or possibly better?

MAMMOTH CAVE; FRIEND HOLMES TELLS US SOMETHING ABOUT HOW TO GET THERE.

SINCE my articles on the Mammoth Cave appeared, several have asked the question as to the best way, cost of getting there, etc.; and Mr. Holmes has kindly furnished me the following. If you will write to him where you live, he will probably tell you about what the expense of the trip will be.

Mammoth Cave, Kentucky, is eight miles from Cave City station, which is 195 miles south of Cincinnati, and 85 miles south of Louisville, on the main line of the Louisville & Nashville Railroad, which is one of the great trunk lines from all points north to Florida, and from the North and East to Texas, Mexico, Arizona, and California; and passengers purchasing their tickets over the Louisville & Nashville railroad, by notifying the conductor after leaving Louisville, can stop at Cave City to visit Mammoth Cave, within the limit of their tickets. Parties desiring to visit the cave can make arrangements for so doing by writing to General Passenger Agent, Louisville & Nashville Railroad, Louisville, Ky., or Herman Holmes, Traveling Passenger Agent, Medina, Ohio.

ADVERTISEMENTS THAT DO NOT PAY.

SOMETIMES an advertiser writes that his advertisement has not brought him a single application. Now, although we are very sorry to know that any investment of this kind has not been a paying one, we can in no wise be responsible for the result of such ventures. We sell you the space in our advertising columns, and arrange it so as to make the best appearance possible for each of our advertisers; but the result must rest with the one who gives the order. Perhaps some suggestions in regard to advertising may help you. When the season is comparatively over for untested queens, and everybody wants to sell, a good many will put in an advertisement. At such times it may meet with no response, where the same advertisement, put in in April or May, would flood the advertiser with orders. Again, people are a little slow in sending their money to a new man. A trade in any commodity must be built up by degrees, as a general thing, and it is only human nature to prefer to wait until your card has been standing for some time in the advertising pages, before sending an order. People prefer to get acquainted, as it were; but after they once discover you are prompt, and that you furnish all or more than what you agree to, your advertisements will meet with a quick and bountiful harvest, providing, of course, your prices are fair, and that you come before the public at a season when your goods are in demand.

BEE-KEEPERS WHO MAKE A BUSINESS OF GETTING TRUSTED FOR SUPPLIES WHICH THEY NEVER INTEND TO PAY FOR.

A PAPER on this subject has just been sent us for publication. The writer states that there are men who get trusted one year to A, the next year to B, the next to C, and so on, without ever paying any of their bills; and the proposition is made, that the names of such men be published. I am glad to see that this class of individuals seldom go into bee culture very much; but I do feel that there are enough of them so that the names of one or more of them should be kept constantly before the public, as a warning. Before doing this, however, we will notify the parties, and ask them what they have to say in regard to the course they have pursued. Another thing, I do not believe it is right for supply-deal-

ers to trust men whom they do not know. Insist on having a reference from the station agent, postmaster, or banker, before you fill any man's order without the cash, unless you know something about him; or inclose a postal card to us, and we will tell you, without charge, whom you can trust and whom you can not, as a general thing, for we have records of almost every man who has asked for credit for things pertaining to the bee or honey business. It is a part of the duty of bee-journals, without question, to save their patrons from losses of this kind.

REPORTS ENCOURAGING.

AS the honey season is over with us I will report my success. I started in the spring with three weak swarms and two fair ones; increased to 14 by natural swarming, and have extracted 590 lbs. of white-clover honey; have 100 lbs. yet in the combs, also 50 lbs. section-box honey. Basswood did not yield as much honey as we anticipated, as it did not last over four days. White clover came about June 1st, and lasted until the latter part of July. M. W. SHEPHERD.

Rochester, Ohio, Aug. 5, 1885.

Bees are now doing very well. We are getting 15 cents per pound for comb honey.

GEO. B. MCARTHUR.

Pickering, Mo., Aug. 7, 1885.

I report a very good season. I think I shall get 7500 lbs. from 101 swarms, spring count, mostly blacks. I lost one in wintering.

E. L. SWACKHAMER.

Schenevus, N. Y., Aug. 10, 1885.

Our bees have exceeded our brightest expectations. Some of the hives, which are only wild swarms, have completely filled their hives in a week or two; so if it were not for taking cards of honey and brood to feed in other young hives, and, together with the cutting-out of combs and all, I don't know what we should do with our honey.

A. P. GIBSON.

Church Hill, Jeff. Co., Miss., June 28, 1885.

CONVENTION NOTICES.

The Western N. Y. and Northern Pennsylvania Bee-Keepers' Convention is to be held at Salamanca, N. Y., Sept. 1 and 2d, 1885.

Jamestown, N. Y.

A. D. JACOB, Sec.

The Mahoning-Valley Bee-Keepers' Association meets at Newton Falls, O., Aug. 20, 1885.

E. W. TURNER, Sec.

The best Queens out.

I will furnish queens from July 1 to September 1 for one dollar; warranted tested, \$2.00; after then the price will be the same as in A. I. Root's list. Queens all bred from an imported mother.

G. F. SMITH,

16tfdb Bald Mt., Lackawanna Co., Pa.

DADANT'S FOUNDATION FACTORY, WHOLESALE and RETAIL. See advertisement in another column. 3btfdb

For Sale. Six full colonies of bees in L. hives, on frames of wired foundation, \$6.00 each. They are strong, and have black and hybrid queens. I guarantee safe arrival.

IRA D. ALDERMAN, TAYLOR BRIDGE, SAMPSON CO., N. C.

Red-Clover Queens by Return Mail.

I am now up with my orders, and can send queens by return mail. My queens are almost without an exception purely mated, and my bees worked just thick on red clover from the time it bloomed until the present.

J. T. WILSON,

15tfdb NICHOLASVILLE, KY.

IF YOU WANT

A GOOD ONE-PIECE SECTION *CHEAP*

Send to us. Sample and Price List Free.

SMITH & SMITH, KENTON, HARDIN CO., OHIO

2tfdb

VANDERVORT COMB FOUNDATION MILLS.

Send for samples and reduced price list.

2tfdb JNO. VANDERVORT, Laceyville, Pa.

Black and Hybrid Queens For Sale.

For the benefit of friends who have black or hybrid queens which they want to dispose of, we will insert notices free of charge, as below. We do this because there is hardly value enough to these queens to pay for buying them up and keeping them in stock; and yet it is oftentimes quite an accommodation to those who can not afford higher-priced ones.

I have 8 or 10 hybrid queens I will sell at 25 cents each. FRANK BAKER, Oakley, Macon Co., Ill.

I have 3 hybrid queens at 35c each, or the 3 for one dollar, by mail. W. A. COMPTON, Lynnville, Tenn.

A few good black and hybrid queens, at 15 and 25 cts. Kanawha-Valley Apiary, St. Albans, W. Va.

I have two black queens for sale at 25c each, or the two for 40 cents.

L. W. GRAY, Troy, Orange Co., Fla.

I have a few good laying hybrid queens for sale, at 50 cents each; blacks, 25 cents.

D. B. ULERY, New Carlisle, O.

I have a few hybrids I would dispose of for 30 cts. each; black queens 20c.

JOHN H. MARTIN, Hartford, Wash. Co., N. Y.

I have four young Italian queens, with clipped wings, that I will sell for 75 cts. each.

MARIA L. DEMING, Watertown, Wash. Co., Ohio.

Hybrid queens, 50 cts. each; black queens, 25 cts. each; from Aug. 1st to Oct. 1st, safe arrival guaranteed. G. D. RAUDENBUSH, Reading, Berks Co., Pa.

I have a few hybrid queens—some daughters of imported mother, for which I will take 35 cents a piece. W. A. KIRTLAN, Salem, Col. Co., Ohio.

I have about 30 hybrid queens which I will mail for 50c each; 5 for \$2.00. These are '85 queens. B. T. BLEASDALE, 596 Woodland Ave., Cleveland, O.

Five fine large yellow hybrid queens, two months old, bred from pure Italian mothers, at 40c each, and guarantee safe arrival.

CHAS. MCCLAVE, New London, Ohio.

I still have a few very prolific hybrid queens that I will sell for 50c each. Queens ready to go by first mail. Safe arrival guaranteed.

GEO. P. KIME, Evansburgh, Coshocton Co., Ohio.

I have 15 or 20 hybrids which I will mail at 50 cents each. Pound of bees, frame of brood, and honey in nucleus hive, \$1.50 more. Two-year-old Italian queens, 75 cts. Bees as above, \$2.00. CHAS. R. BINGHAM, Edinburg, Portage Co., Ohio.

Speak quick if you want them. Several dark or small Italians, several fine hybrids, and several dark hybrids, at 15, 20, and 30c each, according to merits. No poor ones sold. Sent in Pect cages. C. WECKESSER, Marshallville, Wayne Co., Ohio.

Waterbury Watches, Old Series.

In order to close out the old ones, we will sell the following watches while they last, as follows:

Of series A we have 4½ dozen. These have nickel cases, and are in good running order. The objectionable feature is, that they have an opening in the dial. We will send these for \$2.00 each.

Of series B, we have 31 watches left. These are equal to any in appearance and time-keeping qualities, only they have not some of the more recent improvements. So long as they last, \$2.50. I have carried all the above, to test them myself individually; and any one of them that does not keep time when you get it may be returned at my expense.

A. I. ROOT, Medina, Ohio.

RUBBER STAMPS

DATING, ADDRESSING, BUSINESS,
LETTER HEADS, ETC.



No. 1.



No. 3.



No. 2.

self and all who do business with you a "world of trouble." I know, you see.

We have those suitable for druggists, grocers, men, hardware dealers, dentists, etc. Send for circular.

A. I. Root, Medina, O.

THE A B C OF CARP CULTURE

JUST ISSUED.

A COMPLETE TREATISE
Upon the Food Carp and its Culture,

INCLUDING PLANS AND SPECIFICATIONS, AND FULL-
EST INSTRUCTIONS FOR THE CONSTRUCTION OF
PONDS, AND EVERY THING PERTAINING TO THE
BUSINESS OF RAISING CARP FOR FOOD.

By MILTON P. PEIRCE,

Secretary of the American Car Cultural Association.

Illustrated by Many Fine Engravings,

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PRICE 45 CTS.; BY MAIL, 50 CTS.

A. I. ROOT, MEDINA, OHIO.

The A B C of POTATO + CULTURE.

HOW TO GROW THEM IN THE LARGEST QUANTITY, AND
OF THE FINEST QUALITY, WITH THE LEAST EX-
PENDITURE OF TIME AND LABOR.

*Carefully Considering all the Latest Improve-
ments in this Branch of Agriculture up to
the Present Date.*

ILLUSTRATED BY TWENTY ENGRAVINGS.

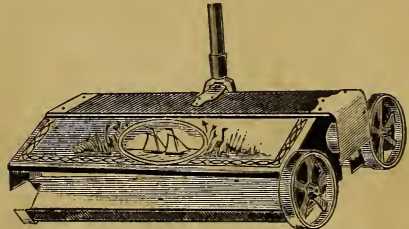
Written by T. B. TERRY, of Hudson, O.

Table of Contents: Soils, and their Preparation.—
Manures, and their Application.—When, and How
Far Apart Shall we Plant?—Shall we Plant Deep or
Shallow?—Shall we Plant in Hills or Drills?—How to
Make the Drills, and Fill Them.—Selection and Care
of Seed.—Cutting Seed to One Eye.—Planting Potatoes
by Machinery.—Harrowing, &c.—r Planting.—
Cultivating and Hoeing.—Handling the Bugs.—The
Use of Bushel Boxes.—A Top Box for the Wagon.—
Digging.—Storing.—What Varieties shall we Raise?
—Potato-growing as a Specialty.—Best Rotation
where Potatoes are made a Special Crop.—Cost of
Production, and Profits.

PRICE 35 CTS.; BY MAIL, 38 CTS.

A. I. ROOT, - MEDINA, OHIO.

CARPET - SWEEPER.



This is a beautiful new sweeper, all metal, with latest improvements. The dust can be poured from the sweeper into a pail, without unhooking any thing. The handle stands straight up, ready to take hold of, wherever you happen to leave it. I have selected this one from a great number in the market, because my wife has been telling me for some time that nothing in the whole round of household conveniences saves a woman more time and hard labor than a good carpet-sweeper, especially where there are children to scatter bits of paper, crumbs, etc. Price \$2.00.

A. I. ROOT, Medina, Ohio.

COMB FOUNDATION MACHINES

\$10.00 TO \$40.00.

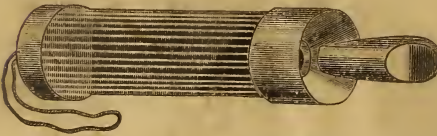
SAMPLES OF FOUNDATION FREE, OR WITH
OUR ONE-POUND SECTION BOX BY
MAIL FOR FIVE CENTS.

For illustration see our Illustrated Catalogue of
Apianian Implements and Supplies, mailed on ap-
plication.

A. I. ROOT, Medina, O.

Klinitz's Queen-Catcher.

[See March Gleanings, page 166.]



A Cage for Catching Queens Without Injury.

DIRECTIONS BY THE INVENTOR.—Take out the plug from the open end, which has to be made in the shape of a funnel, and set this end lightly over her. As the light strikes her from above through the wire she will instantly run up into the cage, which is then closed by replacing the plug. Catching a queen this way is just as quick as picking her up with the tingers, and, above all, she is never hurt. For a number of years I have not used gloves when at work with my bees, but I rely mostly on my catcher when I want to catch a queen, because I am a very nervous person, and can not keep my fingers quiet enough when I am in the least excited. They will tremble in spite of all I can do; and the more valuable the queen is, or the more anxious I am to secure her, the more unsteady my fingers are. But with my catcher I am always safe, and would not feel content, especially in swarming time, without having several of them in my pocket. To make the queen come out quickly I remove the plug and fold my hand around the cage to exclude the light, when she will run out at once, and into any thing I want her to. The string is only for the purpose of hanging the thing up in my honey-room, for I like to have every thing handy. This cage may also be used for introducing queens, by putting it down between the combs, and leaving it there until the bees eat out the candy and set her free. If they do not let her out at the end of 48 hours, release her in the usual way.

Price, 10c each; ten, 85c; 100, \$7.50. By mail, one cent each extra for postage.

A. I. ROOT, Medina, Ohio.

THE A B C OF BEE CULTURE.

Single copies, cloth bound, postpaid by mail, \$1.25; same as above, only paper covers, \$1.00. From the above prices there can be no deviation to any one; but each purchaser, after he has paid full retail price for one book, may order the cloth-bound to any of his friends on payment of \$1.00, or the paper cover at 75 cents each. This discount we give to pay you for showing the book, explaining its worth, etc. If you order them by express or freight, you may take off 15 cts. from each cloth-bound book, or 12 cts. for each one in paper covers. Of course, it will not pay to do this unless you order a number at a time, or order them with other goods. To those who advertise A B C books in their price lists and circulars, a discount of 40 per cent from retail prices will be made, and this discount will be given to all booksellers and newsdealers. To any one who purchases 100 at one time, a still further discount will be made, to be given on application, and the 100 may be made up of part cloth and part paper, if desired. Purchasers are requested not to sell single books at less than the regular retail prices, although they may sell two or more at any price they think proper; or the A B C may be clubbed with any other book or periodical, at such prices as the agent thinks proper.

Book's Manual in cloth at the same price as above.

A. I. ROOT, Medina, O.

HYDROMETERS FOR TESTING HONEY.

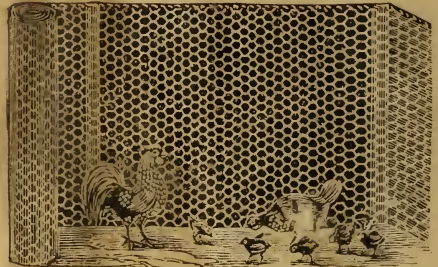
We have succeeded in getting a beautiful little instrument, all of glass, that will indicate the density of honey or maple syrup, or any kind of syrup, by simply dropping it into the liquid. I am greatly surprised that we can furnish so beautiful an instrument for so small a sum of money. Price 35c. By mail, 10c extra. Per 10, \$3.00; per 100, \$25.00.

A. I. ROOT, MEDINA, OHIO.

GALVANIZED WIRE NETTING

FOR

POULTRY INCLOSURES, ETC.



This wire netting comes in rolls 150 feet in length and 4 feet in width. This would give 600 sq. ft. of surface, and we are enabled to furnish it at the low price of one cent per sq. foot, or \$6.00 for a roll. Staples for fastening to the posts are 20 cts. per lb., and 1 lb. contains about 400 staples. The posts to hold it should be not more than 10 ft. apart, and it should be set in the ground at least 2 ft. You can put on a top rail, if you choose, but the selvage edge of the netting makes a pretty strong fence; and as the fowls can not see it they can not tell how high to fly; and after being bumped down several times they usually give it up. In putting it on the posts, draw the top of the selvage tight, and afterward draw the bottom down and fasten that. You can put a board a foot wide along the bottom, if you choose. This will prevent small chickens from getting through, and makes the fence one foot higher.

One advantage this netting has over wooden pickets is, that it does not catch the wind as they do, and therefore the posts are not so liable to be tipped over; besides it presents a very much more ornamental appearance, as you will see by the cut. The meshes are two inches across; and where the wire crosses it is securely soldered together, for the whole fabric is immersed in melted zinc after the whole is woven together. The size of wire used is No. 19. This galvanized wire never rusts, so it will last a lifetime, unless it is damaged by careless running into it. If you want to make division fences, so as to keep different breeds from the same yard, it is better to have a board at the bottom at least one foot wide, so the fowls can not be gossiping through the wire, and pecking at one another. You will notice that one roll makes a yard nearly 40 feet square, and this is plenty large enough for 20 or 30 fowls.

Another advantage this netting has over wooden pickets is, that you can see what is going on inside so readily. The wind, also, has free access, which is quite an item during sultry weather. It should be shipped by freight. The weight of a single bale is about 50 lbs. It may be shipped from here or from New York or Chicago, as may be convenient.

If you want us to cut rolls, the price will be 1/2 c. a foot extra. On two or more rolls, we can give 5 per cent discount; on ten or more rolls, a discount of 10 per cent. As the above prices are very close indeed, they can be given only when cash comes with order. This wire netting can be used in a hundred different ways, for protecting any thing. As it is galvanized wire, the weather has no effect on it whatever.

P. S.—We keep in stock only the one width mentioned above; viz., 4 feet high, although you can have it made to order from 2 to 6 feet. The price will be the same; viz., one cent per square foot. All other widths come in bales 150 feet in length. When less than a whole bale is sold, the price will be 1 1/2 cents per square foot.

A. I. ROOT, Medina, O.